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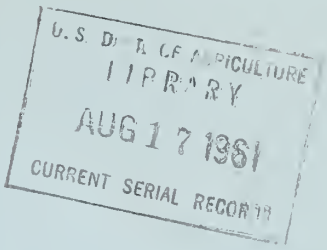


MARKETING SERVICE PROGRAMS

CONDUCTED BY

STATE DEPARTMENTS OF AGRICULTURE
UNDER THE
AGRICULTURAL MARKETING ACT OF 1946

IN COOPERATION WITH

U. S. DEPARTMENT OF AGRICULTURE
OCTOBER 1, 1959 - SEPTEMBER 30, 1960

CONTENTS

Page

Introduction..... 1

Types of marketing service work by major commodities and by States:
- Fruits and vegetables..... 3
- Dairy products..... 4
- Poultry and eggs..... 4
- Livestock..... 4
- Grain, seed, and hay..... 5
- Other commodities..... 5

Summaries of marketing service work by States and by projects:

Alabama
- Improving quality and expanding market outlets for poultry and eggs... 5
- Quality improvement of fruits and vegetables on the Birmingham market. 6

Alaska
- Improving quality and increasing the market for Alaskan products..... 6

Arkansas
- Improving quality and expanding market outlets for poultry and eggs... 7

California
- Improving quality and packaging of California agricultural products... 8
- Development of methodology for certification of virus-free fruit, nut tree, and vine nursery stock (cherries, grapes, peaches, and nectarines)..... 8
- Improving utilization, marketability, and distribution of agricultural products..... 9
- New basic information for tree fruits, tree nuts, and bushberries..... 10
- Grape objective yield survey..... 10
- Walnut objective yield survey..... 10
- Lemon objective yield survey..... 10

Colorado
- Improving marketing practices for wheat, potatoes, lettuce and turkeys..... 11

Florida
- Maintainand improve quality of poultry and eggs..... 11
- Developing methods for determining an accurate preharvest forecast of Florida citrus..... 12

Georgia
- Improving quality and expanding outlets for livestock..... 12
- Improving quality and market outlets for seed (peanuts)..... 14
- Improving quality and expanding market outlets for fruits, nuts, and vegetables..... 14

Page

Georgia--Continued
Improving quality and market outlets for Georgia eggs..... 14
Improving the quality and increasing the value of corn meal..... 15
Providing new basic data (poultry and dairy)..... 15

Illinois
Improving methods of handling fruits and vegetables and poultry and eggs..... 16
Expanding market outlets for dairy products..... 17
Improving facilities and methods of packing and handling fruits and vegetables..... 17
New basic data for livestock, timber, fruits and vegetables, and other agricultural products..... 18
Experimental market news for livestock..... 18

Indiana
Improving the quality of dairy products..... 19
Maintaining quality and expanding outlets for floricultural products.. 19
Developing an orderly pattern of marketing agricultural products..... 20
Improving efficiency in operating methods in food processing plants... 20
Providing marketing information and increasing marketing efficiency... 21
Quarterly pig crop report..... 22

Iowa
Improving quality and market acceptance of Iowa farm products..... 22
Providing basic data and marketing information for agricultural products..... 22

Kansas
Improving the quality of dairy products..... 23
Improving marketing methods and expanding outlets (wheat and wheat products, livestock and meats, retail merchandising, poultry and eggs, fruits and vegetables, dairy products)..... 23
Furnishing new marketing information and basic data (wheat, livestock, poultry and eggs)..... 25

Kentucky
Improving marketing methods and expanding outlets (livestock, fruits and vegetables, poultry and eggs, dairy)..... 26
New basic data (commercial flock inventory, sheep and wool survey).... 27

Louisiana
Improving quality and expanding outlets (fruits and vegetables, dairy) 28
Improving marketing methods and expanding outlets for poultry and eggs 29
Disseminating special market information for Louisiana products..... 30
Improving facilities, handling, and transportation of agricultural products..... 30
Improving efficiency of cotton gins..... 30
Disseminating special market information (timber products)..... 31

Page

Maine
Expanding market outlets (potatoes, poultry and eggs, red meats, milk, apples)..... 31
Improving marketing efficiency..... 33

Maryland
Improving grading and handling methods for grain and soybeans..... 34
Providing assistance and service to canning and processing plants..... 34
Improving the marketing of fruits and vegetables..... 35
Improving methods of grading and marketing livestock and wool..... 36
Improving basic data and marketing information (tobacco)..... 37

Massachusetts
Maintaining and improving quality of dairy and other agricultural products..... 38
Providing new basic data for vegetables..... 38

Michigan
Developing methods of certifying virus-free nursery stock (cherries, strawberries, peaches)..... 39
Improving and maintaining quality of agricultural products (potatoes, apples, eggs)..... 40
Improving livestock market news information..... 41
Providing basic data and special marketing information..... 41

Minnesota
Developing methods of certifying virus-free nursery stock..... 41
Improving quality of agricultural products (eggs, dairy products, and maple syrup)..... 42
Expanding market outlets for farm products (apples, dairy products, eggs, and honey)..... 43
Providing new basic data..... 44

Mississippi
Improving milk handling methods and expanding outlets for dairy products..... 44
Maintaining quality and expanding market outlets for poultry and eggs 44
Improving quality and expanding market outlets for fresh fruits and vegetables..... 44
New basic data and marketing information..... 45

Missouri
Expanding market outlets for agricultural products (fruits)..... 46
Obtaining and providing new basic data..... 46
Market price reporting..... 46

Montana
Improving quality of dairy products and eggs..... 46
Providing basic data (grain and livestock)..... 48

Page

Nebraska
Providing additional basic data and marketing information..... 48

New Jersey
Expanding market outlets through improved quality, handling, and merchandising methods (poultry and eggs, fruits and vegetables).... 49
Providing new basic data and marketing information..... 51

New Mexico
Maintaining and improving the quality of poultry and eggs, fruits and vegetables, and other agricultural products..... 51
Expanding market outlets for agricultural products..... 52

New York
Providing market information and expanding market outlets for agricultural products (potatoes, eggs, apples, farm products, vegetables, livestock, maple products, Christmas trees)..... 52
Improving marketing efficiency..... 55
Providing new basic data..... 56

North Carolina
Improving marketing practices and expanding outlets (fruits and vegetables, tobacco, dairy, poultry and eggs, livestock)..... 56
Improving efficiency of cotton gins and cornmeal mills and providing other technical or engineering assistance..... 58
Improving facilities and methods for handling grain and seed..... 59
Providing new basic data (tobacco, cotton)..... 59

North Dakota
Improving and maintaining quality of dairy products..... 60
Demonstrating methods of preventing deterioration and contamination of grain in storage..... 61
Improving methods and expanding market outlets for Red River Valley potatoes..... 61

Ohio
Providing new basic data (hogs, fruits, timber)..... 62

Oklahoma
Improving and maintaining quality of agricultural products (eggs, dairy products)..... 63
Expanding outlets for farm products..... 63

Oregon
Maintaining the quality of stored filberts..... 63
Improving quality and marketing practices for potatoes..... 64
Preserving seed quality through improved handling and packaging..... 64
Development of methodology for certification of virus-free nursery stock..... 65
Assisting marketing agencies in reducing costs and improving efficiency..... 66

Page

Oregon--Continued
Objective sampling of filbert nuts..... 66
Providing marketing information (grain)..... 66

Pennsylvania
Expanding outlets for farm products..... 67
Improvements in market organization and facilities..... 67
Providing basic data and marketing information (milk, Christmas trees)..... 68

South Carolina
Improving marketing facilities for agricultural products (grapes, tobacco, cotton, pecans, soybeans, sweetpotatoes)..... 68
Providing basic data and other marketing information..... 69

South Dakota
Providing basic data..... 70

Tennessee
Improve marketing methods and expanding outlets for poultry and eggs..... 70
Improving livestock marketing methods..... 70

Texas
Improving quality of farm products (eggs, dairy and poultry products) 71
Expanding outlets for farm products (seed, sweetpotatoes, watermelons) 71

Vermont
Improving milk flavor..... 72
Expanding market outlets for agricultural products..... 72

Virginia
Improving and maintaining quality..... 73
Improving marketing practices and expanding outlets (feeder pigs, fruits, sweetpotatoes)..... 74
Improving marketing facilities, equipment, and methods (vegetables, eggs, wool and grain)..... 74
Providing special marketing information..... 75

Washington
Improving marketing methods and expanding outlets (vegetables, poultry, livestock, hay)..... 76
Providing basic information..... 77

West Virginia
Expanding market outlets for agricultural products (timber, eggs, vegetables, fruit, livestock, tobacco)..... 77
Collecting and disseminating basic data..... 79

Page

Wisconsin
Improving quality of dairy products..... 79
Providing technical assistance to producers, distributors, and market agencies (livestock, fruits and vegetables, dairy products) 80
Providing new basic data (livestock, dairy, fruits, vegetables and field crops, poultry)..... 82

Recent marketing publications by States..... 84

July 1961

MARKETING SERVICE PROGRAMS

conducted by
STATE DEPARTMENTS OF AGRICULTURE
under the Agricultural Marketing Act of 1946

In cooperation with U.S. Department of Agriculture
(October 1, 1959 - September 30, 1960) 1/

INTRODUCTION

Marketing service programs conducted by State departments of agriculture under the matching fund authority of the Agricultural Marketing Act of 1946 were started in 1947 with 21 States participating. Programs were carried on in 40 States in 1959-60. All of the programs are described in this report. The States are:

Alabama	Maine	North Dakota
Alaska	Maryland	Ohio
Arkansas	Massachusetts	Oklahoma
California	Michigan	Oregon
Colorado	Minnesota	Pennsylvania
Florida	Mississippi	South Carolina
Georgia	Missouri	South Dakota
Illinois	Montana	Tennessee
Indiana	Nebraska	Texas
Iowa	New Jersey	Vermont
Kansas	New Mexico	Virginia
Kentucky	New York	Washington
Louisiana	North Carolina	West Virginia
		Wisconsin

These programs are designed to help marketing agencies at the various levels of distribution adopt new techniques and methods for performing marketing operations discovered or developed through research under the Act; show these marketing agencies and producers how to improve or maintain the quality of farm products during marketing; provide producers and marketing agencies with new, or more timely and complete marketing facts and information; and expand markets for farm products.

The Liaison Office, Matching Fund Program, Agricultural Marketing Service, provides guidance and assistance to the States in conducting these programs.

1/ Material in this report compiled by Mildred Pasternak, Liaison Office, Matching Fund Program, State Departments of Agriculture, AMS, U.S. Dept. Agr.

They also assisted in planning and conducting the annual National Marketing Service Workshop, held at Biloxi, Mississippi, November 15, 16, and 17, 1960. The 247 representatives from 37 States and the District of Columbia attending this workshop considered new methods and tools for improving agricultural marketing.

General guidance to the matching fund program is provided by the Advisory Committee on Cooperative Work under the Agricultural Marketing Act with State Departments of Agriculture. Members of that committee are: L. Y. Ballentine, North Carolina, chairman; George H. Chick, Maine; Spencer Duncan, New York; Roy Freeland, Kansas; and Donald E. Wilkinson, Wisconsin.

To improve the operation of their programs and prevent duplication of effort, the State departments of agriculture maintain close cooperation with industry and trade groups, State extension services and agricultural experiment stations, vocational educational agencies, and the U.S. Department of Agriculture.

These programs are conducted under cooperative agreements between the State department of agriculture, or a similar agency responsible for marketing service work, and the U.S. Department of Agriculture. Individual projects are initiated by the States and approved by the Agricultural Marketing Service. Allotments were made to the States to conduct 117 projects during the period covered by this report. Projects were divided among the following four major fields of work authorized under the Act:

1. Maintaining product quality

State departments of agriculture give firsthand assistance to producers and marketing agencies in determining the causes of quality losses and in taking corrective actions. This work often involves detailed plant and retail store surveys to spot the places and operations where bruising, contamination, and other causes of quality losses are occurring; consulting with plant or store management on the problems found; and providing firsthand assistance in adopting recommended corrective measures. Demonstrations of official grades and standards and the advantages of improved containers in maintaining quality are given to producers and marketing agencies.

2. Expanding market outlets

Work in this field is aimed at increasing the consumption of our abundant agricultural production. In helping to accomplish this objective, the States provide more timely and reliable production and marketing information and develop an improved communication system with potential buyers. Frequently, basic changes in grading, packaging, processing, and distribution methods are necessary to achieve increased consumption on a sustained basis.

3. Reducing costs through improving efficiency of marketing facilities and operations

Under the projects in this field, State departments of agriculture help producers and marketing agencies design new or remodeled facilities; select equipment; plan layouts; and adopt work methods which speed output, reduce labor

requirements per unit, and reduce costs. Assistance also is provided in determining the most effective locations and efficient sizes of new facilities such as livestock auctions, poultry processing plants, grain elevators, milk plants, fruit and vegetable assembly markets, and food distribution centers.

4. Providing new basic data and market information

New information and basic data on both a State and local area basis, relating to trends in production, changes in consumer demand, the competitive situation in markets, storage holdings, and rate of disappearance, are collected, analyzed, and disseminated by Federal-State statisticians in the various programs. These data are of value to producers and marketing agencies in planning programs. Information to provide a more dependable basis for crop estimates and projection of production trends is obtained through censuses of tree numbers and objective samplings of crops at various stages of growth.

With the trend toward decentralized packing and processing, the bypassing of terminal markets, and direct selling at country points, the need has increased for market news information at the local market level. To meet this growing need, experimental market news coverage is being provided for local markets not heretofore reported. If successful, the States may incorporate these programs as a part of their regular market news service and support them entirely with State funds. If not, they are discontinued.

This progress report, prepared from material submitted by the States, presents (1) the types of marketing service programs by major commodities, and States; (2) summaries of work by States and projects; and (3) a list of recent publications issued in connection with the projects.

TYPES OF MARKETING SERVICE WORK BY MAJOR COMMODITIES AND BY STATES

Fruits and Vegetables

Improving quality.--Alabama, Alaska, California, Colorado, Georgia, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maine, Maryland, Michigan, Minnesota, Mississippi, Missouri, New Jersey, New Mexico, New York, North Carolina, Oklahoma, Oregon, Texas, Virginia, Washington, West Virginia, and Wisconsin.

Expanding outlets.--Alabama, Alaska, California, Colorado, Georgia, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maine, Maryland, Michigan, Minnesota, Mississippi, Missouri, New Jersey, New Mexico, New York, North Carolina, North Dakota, Oklahoma, Pennsylvania, South Carolina, Texas, Virginia, Washington, West Virginia, and Wisconsin.

Improving marketing efficiency.--Alaska, Colorado, Georgia, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maine, Maryland, New Jersey, New York, North Carolina, Oregon, Pennsylvania, South Carolina, Virginia, West Virginia, and Wisconsin.

Providing basic data and marketing information.--Alaska, California, Florida, Georgia, Illinois, Indiana, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Mississippi, Missouri, New Jersey, New Mexico, New York, North Carolina, Ohio, Oregon, South Carolina, South Dakota, Texas, Virginia, Washington, West Virginia, and Wisconsin.

Dairy Products

Improving quality.--Alaska, Georgia, Indiana, Kansas, Kentucky, Louisiana, Massachusetts, Minnesota, Mississippi, Montana, North Dakota, Oklahoma, Vermont, and Wisconsin.

Expanding outlets.--Alaska, Georgia, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maine, Montana, New Jersey, New York, North Carolina, and Virginia.

Improving marketing efficiency.--Illinois, Louisiana, Mississippi, Virginia, and Wisconsin.

Providing basic data and marketing information.--Indiana, Iowa, Louisiana, Minnesota, Mississippi, New Jersey, New York, Pennsylvania, South Carolina, South Dakota, Virginia, West Virginia, and Wisconsin.

Poultry and Eggs

Improving quality.--Alabama, Alaska, Arkansas, Florida, Georgia, Illinois, Kansas, Kentucky, Louisiana, Maine, Maryland, Michigan, Minnesota, Mississippi, Montana, New Jersey, New Mexico, New York, North Carolina, Oklahoma, Pennsylvania, Tennessee, Texas, Virginia, Washington, and West Virginia.

Expanding outlets.--Alabama, Alaska, Arkansas, Colorado, Florida, Georgia, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maine, Minnesota, Mississippi, Montana, New Jersey, New Mexico, New York, North Carolina, Oklahoma, Pennsylvania, Tennessee, Texas, Virginia, Washington, and West Virginia.

Improving marketing efficiency.--Arkansas, Florida, Georgia, Illinois, Kansas, Louisiana, Maryland, Minnesota, New York, North Carolina, Oklahoma, Tennessee, Virginia, and West Virginia.

Providing basic data and marketing information.--Georgia, Illinois, Iowa, Kansas, Kentucky, Maryland, Michigan, Minnesota, Mississippi, Missouri, New Jersey, New York, South Carolina, South Dakota, Virginia, Washington, West Virginia, and Wisconsin.

Livestock

Improving quality.--Alaska, Colorado, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, North Carolina, Pennsylvania, Tennessee, Virginia, West Virginia, and Wisconsin.

Expanding outlets.--Alaska, Georgia, Indiana, Kansas, Kentucky, Maine, Maryland, Minnesota, Missouri, North Carolina, Oklahoma, Tennessee, Virginia, Washington, West Virginia, and Wisconsin.

Improving marketing efficiency.--Illinois, Kentucky, North Carolina, Virginia, and Wisconsin.

Providing basic data and marketing information.--Georgia, Kansas, Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Jersey, New York, Ohio, South Carolina, South Dakota, Virginia, Washington, West Virginia, and Wisconsin.

Grain, Seed, and Hay

Improving quality.--Alaska, Colorado, Georgia, Indiana, Maryland, North Carolina, North Dakota, Oregon, Texas, and Virginia.

Expanding outlets.--Alaska, Colorado, Georgia, Kansas, Louisiana, Maine, Minnesota, North Carolina, Oklahoma, and Virginia.

Improving marketing efficiency.--Georgia, Kansas, Louisiana, Maryland, North Carolina, South Carolina, and Virginia.

Providing basic data and marketing information.--Illinois, Indiana, Kansas, Louisiana, Minnesota, Mississippi, Montana, New York, North Carolina, Oregon, South Carolina, South Dakota, Texas, Virginia, Washington, and Wisconsin.

Other Commodities

State departments of agriculture also helped producers and marketing agencies in improving the marketing of several other commodities, such as cotton, wool, tobacco, honey, maple syrup, and nursery and forest products.

The following summary describes the activities and accomplishments of each of the States participating in the program during the reporting year, October 1, 1959-September 30, 1960.

SUMMARIES OF MARKETING SERVICE WORK BY STATES AND BY PROJECTS

ALABAMA

Improving quality and expanding market outlets for poultry and eggs (ALA-A-2)

The Alabama department continued its activities in assisting egg producers, wholesalers, and retailers in adopting improved methods of cleaning, packing, grading, storing, and marketing eggs. The department cooperated with the Extension Service and national and local poultry and egg associations in conducting shell egg grading and quality schools, and assisted, through a series of television programs, in promoting the consumption of eggs. As a result, the quality of Alabama eggs has improved and producers now are shipping eggs to out-of-State markets. Total egg consumption in Alabama has increased by approximately 3 percent during the past year. Under this matching fund project,

assistance also was given the newly organized Southeastern Egg Marketing Association in coordinating the marketing of eggs and in developing markets for eggs produced in the southeastern States.

Quality improvement of fruits and vegetables on the Birmingham market (ALA-A-3)

This project was initiated in December 1959 to improve the market quality and consumer acceptability of produce offered for sale on the Birmingham market. Much of the fruits and vegetables brought into the market by nearby growers was ungraded and varied greatly as to condition, size, and type of container used. This situation restricted outlets to the smaller nearby retailers, public eating establishments, and consumers shopping in the market. Under these conditions the amount of produce that could be sold at satisfactory prices was rather limited.

The first steps in correcting these conditions were to work with the market officials in cleaning up the market area and to assist producers and sellers in eliminating decayed and off-quality produce offered for sale. Each load of produce was examined to determine grade and condition of commodities received on the market. Produce handlers were shown how to improve the value of their products by better grading and packing methods and by choosing proper containers.

During this first year of the project, the sale of off-quality produce has been virtually eliminated, and sales have increased 5 to 10 percent.

As a result of this program the market has been maintained in an excellent sanitary condition, and producers have become more quality conscious and are beginning to realize the benefits of better grading, packing, and standardized containers. Efforts are being made to acquaint large buyers and other buyers outside the Birmingham area with the fact that good quality, standardized products in suitable containers can be acquired in quantity on the Birmingham market.

ALASKA

Improving quality and increasing the market for Alaskan products (ALAS-A-1)

Personnel of the Alaska department assisted in the promotion of farm produce by furnishing information for television programs and in preparing and distributing a leaflet emphasizing locally grown commodities. During the year two growers were assisted in revising their storage practices for lettuce in an effort to prevent loss of the late crop from frost and to increase the market season by an additional week, which would mean approximately $10,000 in sales.

Activities to improve egg quality were continued, with major emphasis placed on organizing egg producers into a statewide organization known as the Poultry and Egg Council of Alaska. Three of the large egg producers entered a joint program of marketing under a common brand, with one producer doing all the marketing. This reduced the number of brands, resulted in decreased marketing costs, and permitted a coordinated advertising effort.

The department continued to cooperate with the Experiment Station and Extension Service in efforts to market reindeer meat. Advance orders for reindeer meat were double the previous year, or an increase of about $15,000 in farm income.

ARKANSAS

Improving quality and expanding market outlets for poultry and eggs (ARK-A-1)

Eggs.--Activities under this project have been of vital importance in advancing the Arkansas egg industry to its present status as a major supplier of high quality eggs to outlets in Arkansas and to out-of-State markets. Among the numerous activities in this connection were: Assisting small merchants in developing candling equipment; assisting packers in adjusting grading and packing machines; and demonstrating proper cleaning, grading, and handling methods.

Specific examples of project activities and some of the results being obtained are as follows:

1. As a result of work with producers, packers, and merchandisers in maintaining egg quality, the quality of eggs sold at retail in Arkansas has shown a steady improvement. A survey of quality eggs at the retail level during the summer months showed the highest percentage of high quality eggs for any previous summer period.

2. Assistance given in establishing an egg breaking operation as an outlet for checks, cracks, and small eggs increased the value of 350 cases used per week by at least $3 per case, or $1,050 per week for this one operation.

3. Egg packers were assisted in developing nonhuman food outlets for inferior quality eggs. For example, a dog food manufacturer has agreed to utilize blood spot eggs and the packers are receiving $3 per case for such eggs, less the expense of hauling and temporary storage. This new outlet for off-quality eggs has the potential of increasing the income of Arkansas egg producers and packers by $50,000 to $100,000 per year.

Poultry.--Surveys were made to determine the factors responsible for quality defects in broilers. Specific recommendations, based on these surveys, were made to producers and contractors for improvement in marketing practices and processing methods to reduce quality losses.

This work not only has resulted in a higher quality broiler but also has brought about a reduction in the condemnation rates in a number of plants. One broiler processor, dressing approximately 250,000 birds per week, encountered condemnation rates from chronic respiratory diseases of from 10 to 12 percent in flocks being produced on contract. A study conducted by service personnel disclosed that flocks with high condemnation rates were from a certain breeder flock source. The processor stopped buying chicks from this source and his condemnation rate is now back to normal, i.e., 1 to 2 percent. The resultant saving to him is an increase in gross income of about $25,000 per week.

Improving quality and packaging of California agricultural products (CALIF-A-1)

Results of field investigations of soluble solids/acid ratios in Thompson Seedless and Perlette varieties of grapes were reported to grape growers and shippers. The California Grape and Tree Fruit League plans to use the results to determine what recommendations it will make to the legislature for establishing a more equitable maturity standard and one which will insure the sale and delivery of grapes which meet with consumer acceptance.

Apple maturity tests were continued as a basis for establishing acceptable minimum maturity standards for the 24 varieties of apples marketed by California growers.

Work was continued, at the request of the peach and nectarine marketing advisory boards, to correlate count and the volume of fruit in the newer packages for peaches and nectarines with the objective of establishing minimum specifications in terms of diameter or other measurements for each "count" pack. Lack of standardization in this regard has created confusion among buyers and sellers and has led to undesirable practices which have interfered with industry efforts to expand markets.

Development of methodology for certification of virus-free fruit, nut tree, and vine nursery stock (CALIF-A-2)

The department continued its work to develop a system of certification so that virus-free nursery stock can be made available to farmers and so that the additional cost of providing such superior stock can be recovered in the prices charged. Prior to the development of this project a high percentage of the nursery stock offered for sale to growers was contaminated with viruses which caused serious damage and losses to fruit, tree nut, and vine nursery stocks. The function of the project is to develop the methodology to the point where its soundness and workability are assured so that it can be placed in practical operation.

Under the certification system established from previous work under this project for certain fruits, nurserymen have been able to identify their stock as being superior in quality and have received price premiums of as much as 25 cents per tree above the price for noncertified stock. Certified trees are more vigorous and more uniform in size because of the absence of viruses and, therefore, are of superior quality. More trees have survived in the nursery row and in the orchard, and this has reduced production costs for both the nurseryman and the farmer. A new market was created for the approved budwood and seed used in the propagation of certified trees.

Cherries.--The cherry program has developed to the place where nursery stock of superior quality is now being marketed as certified under the department's "Regulation and Certification of Cherry Trees." There were 7,662 cherry trees certified and sold during the 1959-60 marketing season. Also 94,000 cherry buds and 150,000 cherry rootstock seeds were approved and sold for propagation of certified trees. One hundred and thirty cherry budwood source trees

and 13 cherry rootstock seed source trees have been registered as approved propagating sources. Fifteen additional seed source trees have received final tests and are in process of being registered. Fifteen nurserymen who grow nearly all the cherry trees produced in California, are participating in the program. It is anticipated that most of the cherry nursery stock produced in California for 1961 planting will be certified.

Grapes.--The grape program has progressed more or less parallel with the cherry program. Grapevine nursery stock of superior quality is now being marketed as certified stock. In 1959, approximately 170,000 grapevine plants, representing 22 grape varieties, were sold at a premium price of as much as $170 per thousand above the price for noncertified plants. In 1960, more than twice as many (about 357,000) grapevine plants growing under the program are expected to be certified and sold during the 1960-61 marketing season. Twenty nurserymen participated in the program in 1960 and a number of others have applied for entry into the program.

Peaches and nectarines.--Exploratory work was continued and additional steps taken toward developing methodology for a registration and a certification program for peaches and nectarines. During 1959, a 2-year index test was initiated of 35 selected peach and nectarine trees. If the selected trees successfully pass the test after final readings in 1961, progeny trees from them will provide initial registered stock for the proposed peach and nectarine registration and certification program.

Services to nurserymen during the year on almonds, apricots, plums, prunes, apples, pears, and quinces consisted primarily of making preliminary examinations of propagating source trees for the purpose of eventual registration and certification programs.

Improving utilization, marketability, and distribution of agricultural products (CALIF-B-1)

Included for study under this project were problems regarding better preparation of products for market, distribution and utilization, and increasing the effectiveness of promotional programs. During the year two studies were conducted under the project. One of these was a study, for numerous agricultural industries that conduct promotional programs under California Marketing Laws, designed to help producers in analyzing their promotional problems. A report entitled "Development and Administration of Agricultural Product Promotion Programs" was distributed to all interested industries. This report deals with the problems of appraising promotional opportunities, establishing objectives, planning and implementing promotional programs, and evaluating the results.

The second study was concerned with problems that confront the California turkey industry, and recommends that the turkey industry develop standard terminology and bring about its adoption by all brand owners, correct misleading advertising by furnishing retailers with information about the different classes of turkeys and their comparative sales appeal, and also contains recommendations on allocating funds of the Turkey Promotion Advisory Board for promotional programs.

New basic information for tree fruits, tree nuts, and bushberries (CALIF-D-1)

Over 200 important varieties of 35 individual fruit and nut crops are included in the acreage data survey. During the past year, enumerators visited operators of 28,944 fruit and nut orchards--a little over one-fourth of the total in the State--to obtain new information on tree numbers and acreage and to correct and verify inventory records of previous surveys. The results of this survey are published annually in detailed fruit and nut acreage statistics for the State, and have proven valuable to growers, marketing firms, and service industries. The level of bearing acreage provided in this survey was a valuable aid in forecasting 1960 fruit production.

Grape objective yield survey (CALIF-D-4)

During the past year the various surveys developed to provide data for forecasting production of the principal types of grapes produced in California were continued. The objective of this project is to develop a statistical model which will produce forecasts of production to within 5 percent of the actual quantity produced. The number of vineyards included in the sample was reduced from 1,300 to 900 after an analysis revealed that the size of the sample could safely be reduced without adversely affecting accuracy of the experimental forecast. Data from the surveys were used in preparing experimental forecasts of grape production.

Walnut objective yield survey (CALIF-D-5)

Although this project is still in the experimental stage, considerable progress was made during the past year in survey techniques which can be used to develop, through experiments in sampling, and objective counts and measurements, a method which will provide forecasts of walnut production. The walnut objective yield survey involves three separate series of surveys annually. The first is the size increment survey made during June and July to determine the date by which walnut shells have reached maximum size and have begun to harden. The second is a nut count survey made from a random sample of branches in 500 orchards, and the third is a count and size survey made in late September to establish changes in nut population and sizes that occur from late July to harvest. Reports concerning the results of this work in the 1959 season were issued in the spring of 1960, and a formal report was given to the Walnut Control Board, a financial cooperator in the project.

Lemon objective yield survey (CALIF-D-6)

The objective of this project is to develop survey procedures and formulas which will provide estimates of lemon production for the crop year and for periods of 4 to 6 months within the crop year that are within 5 percent of the quantity actually produced. Present forecast procedures provide only an estimate of the production of the entire crop. However, because of the fruiting nature of lemons, it is necessary to develop a series of forecasts for future periods rather than a single forecast for the entire crop year. The results of forecasts from various surveys conducted during the year were made available to the lemon industry, and, although experimental, the data provided in the reports were valuable to those engaged in marketing the crop.

COLORADO

Improving marketing practices for agricultural crops (COLO-A-1)

Wheat.--Under this project, the Colorado department assisted the Colorado Wheat Administrative Committee in a program to explain to consumers the value of wheat products in the diet and to eliminate misconceptions about wheat foods. The Colorado Committee cooperated with other wheat producer groups, including the Great Plains Wheat Marketing Development Association, and organizations in the milling and baking industries in these promotional efforts. The Committee also participates in foreign market development as a member of the Great Plains Association. Specialists of the department contributed to the planning of the program of this Association.

Potatoes.--Activities designed to improve the quality of Colorado potatoes at the consumer level and promote the greater use of potatoes were continued. Efforts were concentrated on evaluation of harvesting practices and in helping producers reduce the incidence of bruising. Personnel assisted producers and shippers in determining the specific gravity of their potatoes as an aid to merchandising. Information obtained from chip manufacturers on the yield of chips from lots of different readings will be used to establish a relationship which will be useful in pricing potatoes for the manufacture of this product. Consideration is being given to setting up a bargaining organization to establish price differentials based on this factor.

Lettuce.--One of the major project activities during the reporting period was in assisting the San Luis Valley Lettuce Board of Control in developing a State lettuce order by providing assistance and advice with respect to market regulations and quality controls. It was estimated that this program added at least $3,000,000 to the income of lettuce producers in this area last year. The Colorado lettuce order was made effective only for the 1959 season but the success of the program was such that the industry voted to reinstate it on a permanent basis.

Turkeys.--The Markets Division assisted Colorado turkey growers in five turkey promotions by disseminating advertising material, contacting newspapers and retailers and assuming general managerial responsibility of the program. These efforts, in cooperation with the Colorado Turkey Federation have enabled the Colorado turkey industry to move its supplies into consumption at fairly stable prices.

During the last 4 years, turkey sales in individual stores have increased an average of more than 100 percent. Colorado's per capita consumption of turkey is a little over 9 pounds, while the national average is $6\frac{1}{4}$ pounds.

FLORIDA

Maintain or improve quality of agricultural products (FLA-A-1)

Work was continued during the year in promoting the sale of eggs and poultry products through publicity, educational, and sales promotion campaigns.

This project was carried on in cooperation with State and national poultry and egg associations, the Extension Service, Experiment Station, and allied groups, and included such activities as conducting egg quality classes for producers, packers, and consumers; instructing retail store personnel on proper storage, care, handling and merchandising of eggs; encouraging the use of a seal of quality; working with restaurant owners in stimulating increased demand for eggs; conducting consumers education programs; providing assistance to poultrymen in organizing an egg cooperative; making numerous television appearances; and furnishing publicity material for radio programs, newspapers,and magazines.

As a result of these efforts per capita egg consumption in Florida for the past year increased 7.4 percent or 20 eggs per person. Producers operating under the quality label program are receiving premiums of from 2 to 4 cents a dozen for their eggs, and the cooperative project with the Restaurant Association has resulted in egg producers supplying restaurants with high quality eggs receiving an estimated $50,000 more for their eggs.

Developing methods for determining an accurate preharvest forecast of Florida citrus (FLA-D-2)

The Florida department is conducting this project in cooperation with the Florida Agricultural Experiment Station, Florida Citrus Growers Administrative Committee, Florida Citrus Commission, and the Agricultural Estimates Division of U.S. Department of Agriculture. Objective fruit counts and measurement data were implemented with data on limb count and frame count to arrive at an October forecast for oranges and grapefruit. Each month during the harvest season fruit was recounted on a sub-sample of limbs to determine droppage. Fruit measurements were also taken in making a determination of fruit size at harvest. As a result, an October forecast estimated production of oranges within less than 2 percent and grapefruit within 5 percent of actual production. (Figure 1.) Accurate forecasts and preseason estimates of the size of the citrus crop are of great value to the citrus industry in making marketing decisions, pricing, and in carrying on other operations vital to the industry.

GEORGIA

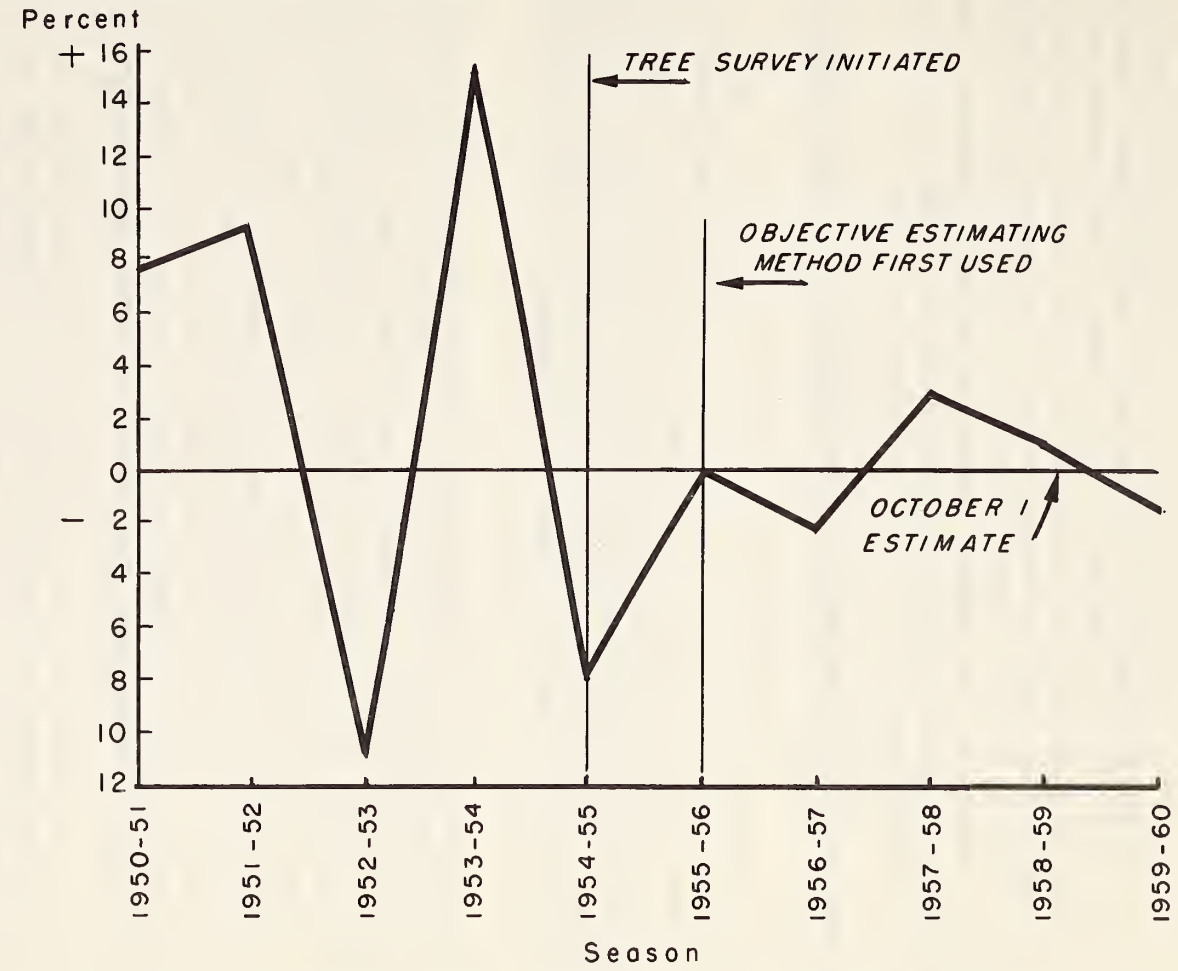
Improving quality and expanding outlets for livestock (GA-A-1)

Emphasis under this project was placed on improving the quality of market hogs and feeder pigs and in developing more effective methods of selling livestock. Efforts directed at quality improvement involved staging demonstrations of live and carcass grading, and encouraging the selection of meat-type breeding stock. Assistance was provided livestock producers in organizing special feeder calf and pig sales, and in planning and conducting spring lamb sales and wool pools.

In addition to the work with organized sales, specialists continued the program of promoting livestock conservation. Demonstrations were given on how to reduce bruising and injury to animals during handling on the farm and in transportation to market.

Figure 1

PERCENTAGE DEVIATIONS, ACTUAL PRODUCTION ALL FLORIDA ORANGES FROM OCTOBER 1 ESTIMATE, 1950-1951 THROUGH 1959-1960 SEASONS*



* January 1 forecast used in 1957-58 account severe freeze

U.S. DEPARTMENT OF AGRICULTURE NEG. AMS 1-61 (4) AGRICULTURAL MARKETING SERVICE

Improving the quality and market outlets for seed (GA-A-2)

Under one phase of this project peanut shelling plants processing peanuts for seed purposes were assisted in establishing procedures for selecting lots having high viability. In the spring of 1960, over 200 samples of peanuts from untreated lots were handtreated and tested to make certain that they were suitable for seed purposes. This activity had a twofold benefit--it reduced losses to shellers and improved demand for their seed. Seed peanuts are treated with a fungicide which makes them valueless for food purposes. Unless care is exercised in selecting lots for seed the sheller can sustain substantial financial losses. Since it costs Georgia farmers over $12,000,000 to plant their crop, if only 5 percent of the acreage has to be replanted because of bad seed and this replanting could be avoided, the service of checking the seed before planting would save them over $500,000 in replanting costs.

Improving quality and expanding market outlets for fruits, nuts, and vegetables (GA-A-3)

The department continued its activities aimed toward improving the quality of Georgia fruits, nuts, and vegetables. Assistance was given producers of these commodities in determining whether their products met minimum standards of quality for sale through public markets. This emphasis on selling good quality products was largely responsible for the record volume of watermelons moving through the established markets in the State. The price improvement resulting from this quality program is estimated to have increased returns to Georgia watermelon growers by about $1,000,000.

Another example of accomplishment under this project concerns a small group of apple growers who in 1957 requested the assistance of the department in solving their marketing problems. These growers were dependent on transient truckers for the sale of their apples, and each grower was in direct competition with the other growers in the area. This situation resulted in many producers being forced to sell apples at cost of production or below. After a thorough study of the problem by the department, in cooperation with the Extension Service and the College of Agriculture of the University of Georgia, it was determined that a central sales organization was needed and the quality of apples marketed would have to be improved. After a packing shed was constructed and modern grading and packaging equipment installed, the apple growers formed an association for the purpose of grading, packing, and marketing the apples. However, it was found that only approximately 55 percent of the apples brought to the packing shed would grade U.S. No. 1 or better. With the assistance of horticulturists of the college the quality of the apples was improved to where in 1959 approximately 85 percent of the apples graded U.S. No. 1 or better. These growers are now receiving an average increase of 75 cents per bushel for about 40,000 bushels of apples, or a net increase of $30,000.

Improving quality and market outlets for Georgia eggs (GA-A-4)

In an effort to maintain high quality eggs and increase market outlets, work was continued with candlers, graders, and packers in the proper handling, packing, and grading of eggs. Increased egg production in Georgia has resulted in exporting large quantities of eggs. Complaints from buyers that the quality

of Georgia eggs deteriorated rapidly prompted an intensive program of quality control at the producer level. Surveys revealed that improper washing procedures was an important cause of quality losses. These are being reduced through a program of demonstrating and encouraging the use of proper washing methods.

Improving the quality and increasing the value of corn meal (GA-A-5)

The problem facing the corn meal industry was one of operating under past policies and using inadequate processing methods and equipment. In an attempt to overcome these obstacles, activities under this project consisted of making personal contacts with individual millers showing them how to operate existing equipment to get maximum efficiency, and where needed and economically feasible, suggesting the installation of new equipment. Now that the millers are thinking in terms of a better product, several promotional programs have been initiated, in cooperation with the Georgia Corn Millers' Association, to increase sales of the improved product. A random check of eight cooperating mills shows increases in volume of sales ranging between 5 and 30 percent.

Providing new basic data (GA-D-1)

The poultry industry has developed into the most important agricultural enterprise in Georgia. Inadequate information at the local level increased the need for accurate estimates of poultry production in the State. To obtain more adequate estimates the following surveys were conducted during the past year on poultry production:

1. A weekly survey of hatcheries and the preparation of a weekly hatchery report showing an estimate of the number of broiler eggs set and broiler chicks placed each week. This information was distributed to about 1,800 persons, and, together with data from market news reports, was used to estimate the annual commercial production of broilers in the State.

2. An annual survey of broiler growers and contractors, including estimates of the annual production of broilers by counties.

3. A monthly survey of commercial egg producers and estimates of the number of hens and pullets on farms each month, including monthly egg production for the State.

In addition to the surveys pertaining to poultry and egg production, a joint monthly survey was conducted that provided data from all the slaughter plants in the State to furnish more accurate estimates of beef and pork production. The department, in cooperation with the Georgia Milk Commission, also conducted a monthly survey of milk production and income from milk.

The results of these activities have furnished more accurate estimates of production than were heretofore possible and have given interested industries a better foundation for making marketing decisions.

Improving methods of handling fruits and vegetables and poultry and eggs (ILL-A-1)

Fruits and vegetables.--The Illinois department was instrumental in establishing additional outlets for strawberries in the Centralia area. This action increased competition at the local level and resulted in improved prices. Gains to the growers in the area proved substantial with more than 150,000 crates marketed during the 1960 season.

In efforts to find solutions to the problems of marketing more mature peaches, department personnel arranged a program under which new methods and packages for marketing mature peaches were evaluated and the benefits demonstrated. The package selected for the tests was a one-layer, wood flat, with two standard perforated pani-pack plastic fillers which would hold 20 pounds of peaches. More than 18,000 packages of this type were packed and marketed and the price received by the cooperating grower for this 20-pound package almost equalled the price received by other growers for packed bushels of peaches. The increase in net income to this grower was about $15,000.

During the past season the department also was instrumental in assisting peach growers in their efforts to get a more satisfactory price for peaches marketed to processing outlets. Although a price of $1.60 per crate had been established for canning peaches by a major outlet, department personnel helped negotiate for new and more equitable specifications for canning peaches which resulted in a price increase of 15 cents per crate. Since approximately 125,000 crates of peaches moved to this outlet, growers gained nearly $19,000 by these activities.

In developing a quality control program for marketing mature Illinois apples, and by maintaining close contact with markets and growers, it was possible to hold back harvest dates of different varieties to keep green immature fruit off the markets. Through these efforts, apples of much higher quality have been put on the market, demand and price have been stabilized, and growers have realized higher prices for their apples.

The information program for buyers of apples and peaches was continued during the year. The market newsletter, together with a guide map, was sent to 6,000 buyers in 24 States and furnished them with information on production areas, estimated volume, quality, variety, probable harvest dates and locations of shippers.

Efforts were continued to improve and expand marketing of southern Illinois vegetables by extending the program of group packing and selling of vegetables produced in that area. As a result of a meeting held with growers at which they were given concrete examples of the gains made since the program was started in 1955, plus the demand of receivers for better pack of uniform produce, volume supplies, and full loads of the same brand, two new sheds were established during the past year. Now practically all cucumbers, peppers, and tomatoes grown in the area are washed, waxed, and packed in labeled containers. The estimated increased returns to growers from the improved methods of packing and selling

through the centralized packinghouses during the 1959 season amounted to $115,525.

Poultry and eggs.--Activities carried on by the department relating to the quality improvement program in egg marketing included the planning and conducting of an egg grading school in cooperation with the University of Illinois, Southern Illinois University, the Illinois Poultry Industry Council, and the U.S. Department of Agriculture. In addition to the training schools, the informational poultry and egg programs were continued through meetings, news releases, radio and television programs, and demonstrations.

Expanding market outlets for dairy products (ILL-B-2)

The success of the pilot project designed to increase consumption of milk at the teenage level prompted the request to work out a plan for such a program in the 4th, 5th, and 6th grades of all schools in the Springfield area and for similar programs in other cities. The nutrition teaching materials were made available to the schools through funds provided by four local dairy processors. The program carried on in the Springfield grade schools resulted in students consuming 46.5 percent more milk during the school year 1959-60 than in 1957-58.

The marketing specialist assigned to this project again assisted in the Route Salesman's Training Course, sponsored by local dairies to increase the sale of milk by improving the selling ability of home delivery salesmen.

Improving facilities and methods of packing and handling fruits and vegetables (ILL-C-1)

Under this project of providing assistance to marketing agencies in improving operating efficiency, procedures were worked out with two vegetable packing sheds for improving handling operations. The operator of one shed was assisted in converting to a palletized operation and in regulating the delivery and flow of produce which minimized extra handling and packing delays. The regular and orderly delivery of produce to the washer resulted in an increase of 20 percent in the rate at which products were moved through this operation. A conveyor was installed to accelerate the packing operation, and the shed's daily packing capacity was increased by about 500 bushels using the same machinery and labor.

At one of the tomato packing sheds, a new delivery belt was installed at the sorting rolls so that full ripe tomatoes could be removed and placed in special bins where they were packed for local sales and delivery to nearby markets and sold at premium prices. This minor addition to the equipment added to the overall income of the operation since if the ripe tomatoes had gone through the entire packing machine they would have been bruised and split and would have been sold as culls.

Two growers were encouraged by department specialists to install washers in their peach and apple packing operations. These washers made it possible to pack fruit when wet and allowed picking operations during inclement weather. It was possible with this new equipment to pack fruit immediately without any drying period as had been necessary when conventional (dry) brushes were used. These machines increased growers' dividends by increasing packing efficiency,

preventing delays because of wet fruit, and lowering the unit cost of packing and handling.

New basic data for livestock, timber, fruits and vegetables, and other agricultural products (ILL-D-1)

In connection with the program to provide new and improved basic data, the following activities were carried on during the year:

1. The commodity bulletin series was expanded to include marketing statistics on fruits, vegetables, and horticultural specialties. These bulletins serve as marketing guides for producers and marketing agencies by providing information on areas of production, volume, and probable harvest dates.

2. A breed survey of barrows and gilts for market was conducted to determine trends toward meat-type hogs, and another on cattle supplemented the quarterly surveys on sow farrowings and calf and lamb births. The quarterly pig survey provides producers and buyers with advance information that was not possible when surveys were made semiannually and enables producers to adjust their hog marketings to market demands.

3. The semiannual survey of timber prices was changed both in format and basis for quotations. The timber price report has reduced speculation in timber products and has made producers aware of products that might be marketed and prices being paid for them.

4. The annual survey of the apple and peach tree population was continued with additional information obtained on the proportions of each variety being planted.

5. Progress was made on the establishment of a county series of beef cow numbers, and extensive work was done on a breakdown of size groups on a county basis for milk cows, grain-fed and other cattle marketed, and laying hens and pullets.

6. Monthly estimates of production by crop reporting districts were prepared for corn, wheat, oats, and soybeans; and farm stocks of these grains prepared on a district basis for each quarter.

Experimental market news for livestock (ILL-D-2)

An experimental livestock market news service was initiated late in the reporting year for livestock sold through local auctions, country buying points, and direct packer buying points in Illinois. At present, the direct sales are being reported on a weekly average of 60,000 to 70,000 hogs being handled by 120 buying points.

Improving the quality of dairy products (IND-A-1)

Efforts were continued to improve quality of manufactured dairy products by improving the quality of the raw milk and cream supply in Indiana. Activities carried on during the year included a field survey of manufacturing grade raw milk received by dairy plants; meetings of plant managers, fieldmen and milk graders at which special emphasis was placed on the problem of antibiotic and pesticide residues in milk; clinics on dairy products at which samples of ice cream, milk, and cottage cheese were analyzed and evaluated; and surveys of all cream buying stations. The results of the field survey of manufacturing grade raw milk quality stimulated the industry to improve grading procedures. Dairy plants increased efforts to place mechanical coolers on producer farms, and at present 41 manufacturing milk producers have installed mechanical coolers, compared to 25 in 1958.

During the year, dairy plants purchasing cream initiated a 4-day cream program whereby a 2-cent premium is paid for cream less than 4 days old, and all cream over 7 days old is rejected. As a result, in 1959-60, 38.7 percent of butter samples were 92 score or better, compared with 30.6 percent in 1958.

A series of leaflets giving recommended procedures for eliminating antibiotics and pesticide residues in milk was distributed through the Indiana Dairy Products Association to producers in Indiana and neighboring States. Recent reports indicate that less than 0.1 percent of milk samples from Indiana contain antibiotics.

Maintaining quality and expanding outlets for floricultural products (IND-A-2)

Indiana ranks 8th in value, greenhouse area, and cut flower production in the United States. The annual value of flowers sold amounts to more than $20 million. More than half of the 500 growers in the State have small plants, and because of the competition from shipped-in flowers are in need of assistance in increasing plant efficiency and merchandising methods.

This project was designed to aid the flower industry in Indiana by (1) informing and instructing growers in proper methods of harvesting, grading, packing, storing, and handling floral products; (2) evaluating acceptance of grades and standards by florists; (3) determining seasonal periods of overproduction and assisting in moving surpluses; (4) assisting wholesalers and retailers in improving facility layout, handling, storage, and marketing operations, and (5) preparing and distributing timely marketing and merchandising information through monthly newsletters.

Since the project was initiated last year, a survey of the florist industry was made to ascertain the marketing problems as well as obtain other useful information about individual operations. Results of the survey are being analyzed and the findings are being used in planning further activities under this project.

Developing an orderly pattern of marketing agricultural products (IND-B-1)

Activities were continued under this program to improve the marketing and distribution of Indiana agricultural products through improvement in quality, developing new markets, better reporting of marketing information, promotional activities and improvements in management practices.

The fourth annual Purdue Marketing Clinic, organized to train marketing personnel in business management and to provide current information on specific commodity problems, was attended by 280 persons, including representatives of marketing firms and trade associations, producers, and university personnel. The theme for the one-day clinic was "Long-Range Consequences of Current Marketing Practices." In addition to holding the marketing clinic, activities with the Farmer-Retailer Committee included promotional programs to aid in the orderly marketing of large volumes of hogs during the fall and winter of 1959-60. Special promotional efforts were coordinated with radio and TV programs, and newspapers to tie in the peak apple movement (9 percent above average) with the National Apple Week promotion.

The Meat Education Day program, the first of its kind to be held in Indiana, was attended by 70 leading producers, packers, retailers, and marketing and trade personnel. Aims and objectives of the meeting were to point out ways in which retail groups could work toward promoting and merchandising meat products in Indiana, to improve the general knowledge and understanding of retail grades by producers of red meats, to publicize beneficial results of such programs, to improve mutual understanding, and to reflect more effectively public preferences back to producers.

In cooperation with the Agricultural Experiment Station, the project initiated to appraise marketing problems associated with the present and prospective flow of fresh fruits and vegetables from the southwestern Indiana area was continued. The study is concerned with the nature of demand for commodities in terms of quantity, product characteristics, and prices; alternative possibilities of first-stage marketing best suited to the growers' long-run profit opportunities, and the relative importance of efficient marketing to the long-run success and growth of commercial fruit and vegetable production in the area. The collection of data has been completed and analyzed and the results of the survey will be published in 1961.

Improving efficiency in operating methods in food processing plants (IND-C-1)

The program to assist the Indiana vegetable canning industry in improving quality was continued during the year. Clinics were held for plant personnel where they received instructions on mold count methods and analysis of extraneous materials, quality control, sanitation, and processing methods. The third annual canners technology conference for plant management was attended by about 100 representatives of food processors and suppliers. Discussions at the 2-day meeting were centered around the subjects of spoilage and its prevention, food additives, extraneous materials and residues.

Project personnel also traveled extensively throughout the State keeping plant operators informed of current technical information which would be of assistance in plant operations.

Providing marketing information and increasing marketing efficiency (IND-D-1)

Livestock.--A series of meetings was held during the year for management personnel of a major Indiana packer. Upon completion of the series of 10 meetings, procedures were developed in forecasting hog slaughter, hog prices, and wholesale cut pork prices.

Major contributions were made in converting slaughter to a daily rate of kill rather than using calendar months which vary in number of slaughter days. Considerable interest has been shown by other processors in the techniques developed of forecasting supplies and prices. The service work in the field of marketing meat-type pork was continued and assistance provided processors who have initiated testing programs in differentiating a meat-type product.

In response to requests from packing plant operators, cooperatives, dealers, and groups of farmers for assistance in locating livestock markets, a procedure was developed by department personnel to estimate the volume of animals marketed in a particular area. Previous studies indicated that within a 5-mile radius of a country market, the operator can expect to get approximately 50 percent of the hogs marketed, and between a 20-to 30-mile radius only 2 percent. Also,for the operation to be profitable the market must handle at least 85,000 units. With this information, management decisions can be made as to whether or not a market should be established in an area and in evaluating a current market.

In an attempt to assist management of small livestock markets in securing additional volume and operating more efficiently, the department assisted in developing an incentive plan for personnel which was adopted by managers of branch markets of a major livestock cooperative. The incentive plan takes into account savings, margins and fixed obligations of the cooperative. An evaluation of the system will be made after the first year of operation.

The monthly publication "Economic and Marketing Information," issued by the Purdue University, was distributed to about 22,500 farmers, agricultural leaders, marketing firms, and others interested in agriculture. Each month the publication deals with specific marketing information that farmers can use as guides in operations, as well as commodity outlook information. Articles on current marketing problems were contributed by staff members assigned to this project. A second monthly publication, "Indiana Farm Prices," was circulated to about 280 people. Information on Indiana farm product prices, feeding ratios, and commodity prices published in this report was given wide coverage by newspapers and radio.

Other forms of marketing material prepared and disseminated during the year included the Indiana Fruit and Vegetable Supply Report, issued weekly to producers, wholesalers, brokers, retailers, and others interested in marketing. This report provides buyers with information on seasonal availability of Indiana fruits and vegetables, information on crop conditions, quality, and location of supplies. In addition to the supply report, the department distributed the consumer information bulletin on foods in plentiful supply to approximately 100 newspapers and radio and TV stations, and released situation reports on market conditions and outlook for specific crops.

About 400 persons attended the Hoosier Cooperative Clinic for managers and directors of cooperatives in Indiana at which problems faced by management and the responsibilities of the directors were discussed and evaluated. In addition to the clinic, individual assistance was provided cooperatives on problems of operational efficiency and in establishing training programs for personnel.

Quarterly pig crop report (IND-D-2)

The results of the quarterly (March and September) reports on the Indiana pig crop and hog inventories were correlated with information obtained from the surveys conducted in June and December as a part of a coordinated 10-State program. Information supplied in these reports provides farmers with timely and more frequent data which enables them to adjust their farrowings to level out seasonal fluctuation in pig production, resulting in more orderly marketing of hogs.

IOWA

Improving quality and market acceptance of Iowa farm products (IOWA-A-1)

Since this project was initiated last year major activities were directed toward increasing the consumption of Iowa red meats. Department personnel assisted in preparing for and participating in a number of exhibits and meetings held throughout the State, in cooperation with various livestock and meat associations, Extension Service, newspapers, TV and radio stations.

Special displays featuring pork were prepared for two exhibits sponsored by radio, TV, and newspapers, which consisted of a refrigerated display of pork carcass and a breakdown into retail cuts. Following the radio and television shows aimed at increasing local consumption of lamb through commercial informational programs, about 850 written requests were received for copies of the booklet, "Enjoyable Meals with Lamb," offered to listeners of the programs.

A representative of the department worked with 3 supermarkets in conducting promotional programs for beef, pork, and lamb through special retail grocery exhibits and cooking demonstrations.

Providing basic data and marketing information for agricultural products (IOWA-D-1)

The Iowa Crop Reporting Service continued to assemble, analyze, and publish agricultural data relating to geographic distribution of supplies, movement and prices, and sources of local market supplies for a large number of Iowa farm products. Data were assembled and published under the following headings: (1) Number of sows farrowing by quarters, September, December, March, and June, and changes in number of hog farms and sow farrowings by size groups;(2) chicken flock changes in numbers and size of flocks; (3) hog and cattle inventory patterns; (4) milk production and marketing patterns; (5) egg production and marketing patterns; (6) quality of Iowa corn crop; and (7) season characteristics affecting crop quality.

Improving the quality of dairy products (KAN-A-1)

The dairy division of the Kansas State Board of Agriculture continued to work with producers, handlers, and processors of dairy products in improving quality of manufacturing milk and cream. For several years the market service work to improve quality of sour cream was conducted at local cream buying stations under the program of cream straining days. This program resulted in 90 percent of all cream received at buying stations being free of sediment. During the past year, because of the low volume of sour cream being marketed, the check on special quality days was discontinued and a check made at the creamery. When evidence of low quality cream was observed at the plant, visits were made to the buying station to assist the operator with his low quality cream problem. This change in procedure has permitted the service work to be directed to the buying stations having low quality cream, and has made it possible for the field representative to observe the quality of the entire volume of cream received at the creamery. In conjunction with the work on quality, training schools were conducted for plant cream graders and field superintendents of buying stations in proper methods of grading and handling cream.

In the past, manufacturing milk had been checked semi-monthly by plants and classified according to USDA sediment standards. During the past year, the dairy division initiated a bacterial classification survey of manufactured milk. Preliminary work indicates that the major part of manufactured milk will not meet a bacterial standard of over 2½ hour Methylene blue. The sediment classification program over the past several years has resulted in approximately 90 percent of the manufactured milk received at plants meeting USDA No. 1 and 2 Sediment Standards. The introduction of bacterial classification should be a strong link in the quality improvement of milk used for manufacturing purposes.

The work relating to quality improvement of market milk was continued through the training of bulk tank operators in detecting off-flavor milk and in proper handling and sanitation practices.

Improving marketing methods and expanding outlets (KAN-B-1)

Wheat and wheat products.--The marketing division continued its coordinated program of domestic wheat market development with the Kansas Wheat Commission during the past year. The program is designed to determine effective means of combating a decline in per capita consumption of wheat food, to eliminate the unfavorable image of wheat products held by some groups, and to facilitate the marketing of quality wheat by Kansas wheat producers. Specific activities carried on during the year included: (1) Preparation and distribution of information and promotional material on wheat products, meeting with foreign buyer teams, and conducting intensive efforts to reduce freight rates for wheat moving to the west coast. Through the efforts of the Great Plains Wheat Market Development Association, of which the Kansas Wheat Commission is a member, a reduction in freight rates of 17½ cents per bushel was brought about for wheat moving from Kansas, Nebraska, and Colorado to west coast ports for export. This opens up a whole new market for Great Plains wheat moving through west coast ports to Asia.

Plans are being made to step up efforts directed toward market expansion for wheat in foreign countries, as well as establishing a more coordinated domestic marketing program for wheat and wheat products on a national level.

Livestock and meats.--In cooperation with the Kansas Livestock Association and the National Livestock and Meat Board, the marketing division continued various activities to increase per capita consumption of meat and meat products. Demonstrations, which included identification, selection, and cooking of economical meat cuts, were instrumental in creating a demand for lower priced parts of beef, pork, and lamb carcasses, thereby making the entire carcass more valuable and increasing the over-all return to the producer. In addition to the public meat demonstrations, meat judging, and carcass evaluation events, information was prepared and distributed to 5,000 4-H and FFA members. A system of evaluating pork carcasses, based on lean cuts, was worked out for the use of packers in buying lean-type hogs from producers.

Assistance provided the Department of Social Welfare in initiating improved meat ordering, receiving, handling, and processing practices resulted in savings of as much as 25 cents per person per day in meal costs at some of the State institutions.

Retail merchandising.--At the request of the produce trade and retail produce managers, personnel of the division, in cooperation with Kansas State University, conducted a produce training school using manuals and basic recommendations of the U.S. Department of Agriculture. Areas covered included: (1) Work simplification, (2) quality control, (3) ordering and receiving, (4) trimming, (5) packaging, bagging, and pricing, (6) backroom layout, and (7) merchandising. A large number of stores have adopted many of the recommendations for improved methods in produce handling operations, and several stores have requested individual layout and time and motion surveys of their operations.

Poultry and eggs.--Assistance was provided egg producers, marketing firms and consumers in various aspects of egg marketing problems through training programs in egg candling and grading. Egg producers marketing eggs under the quality control program are receiving premiums of from 2 to 5 cents per dozen.

The division also provided assistance to egg packers and processing firms in plant facility and layout problems and in product quality improvement and merchandising promotion.

Marketing agencies that have adopted recommendations for facility improvement made by the division are saving 50 cents per case in handling costs, and for one firm with a volume of 50,000 cases per year this has resulted in a savings of $25,000 per year.

A Kansas egg packer with a sizeable market for cartoned eggs in a South American country was assisted in designing point-of-sale display material printed in Spanish, and also was provided with egg carton inserts printed in Spanish explaining egg grades and the meaning of the USDA shield on the carton. Egg sales by this firm have shown a steady increase as consumers show more willingness to accept eggs promoted and packed by a firm employing their native language.

Fruits and vegetables.--Division personnel continued to work with vegetable producers in the irrigated region of southwest Kansas in improving quality and market outlets for their products by providing assistance in packaging, merchandising, and marketing practices. As a result of this assistance, one marketing firm handling potatoes was able to increase returns to producers by an additional 25 cents per bag, or $50 per acre. Another firm handling cantaloups under recommended quality control measures was able to increase the selling price by 50 cents a crate on 300,000 crates for an additional return of $150,000.

Dairy products.--Major emphasis under this phase of the project was again placed in staging demonstrations, in cooperation with the dairy industry, before various groups of new ways to use cottage cheese in the menu. Results of this activity have been especially gratifying by the steady increase in sales of cottage cheese.

Division personnel also cooperated with the American Dairy Association of Kansas in helping conduct various dairy promotional programs, and actively participated in June Dairy Month activities by helping correlate national and State and local promotion and publicity materials and events.

Furnishing new marketing information and basic data (KAN-D-1)

The lines of work undertaken during the year to provide new basic data needed in the marketing of agricultural products included the following:

1. Wheat quality survey
2. Wheat variety survey
3. Commercial grain storage capacity and stocks survey
4. Quarterly livestock survey
5. Wheat prices by grades
6. Beef cattle prices by classes
7. Egg and chicken prices by grades and classes

Wheat.--The wheat quality survey provides current information by counties on both test weight and protein content of wheat, and is made available during the marketing period for producers, grain buyers, and other interested persons. Millers and other grain buyers are thus better informed regarding location of various quality types of wheat, and are better able to make proper adjustments in their purchase prices. Producers, by being better informed as to the quality of wheat in their local area, have been placed in a better bargaining position which has resulted in their receiving premium prices for high protein wheat.

The survey, by counties, on commercial grain storage capacity, grain stocks, and percentage of space available for new crops was again made available to farmers, grain handlers, and railroads. The basic county data provided in this report pointed out areas in which storage problems might be expected to occur and facilitated movement of grain to areas having more than adequate storage space. The survey also included the amount of new grain storage constructed in each county since the previous survey. These data assist farm cooperatives, private concerns, and government agencies in determining locations for constructing new facilities or plants.

A wheat variety survey was made to determine, by counties, the distribution of wheat acreage seeded to each variety. The 1960 survey showed a sharp increase in strong gluten wheats which has focused attention on improved milling qualities of Kansas wheat. This has aided Kansas farmers to obtain premium prices for their wheat and has increased interest in Kansas wheat by foreign buyers. The survey also provided millers and other grain buyers with specific information as to location of type of wheat desired.

Data on prices received for wheat by crop reporting districts and market grades were tabulated, summarized, and released monthly. These releases were sent to millers, grain dealers, Kansas State University, and others interested in the price and quality of Kansas wheat.

Livestock.--March 1 and September 1 estimates were prepared and released for hog inventories, sow farrowings, and intended farrowings to supplement the regular June 1 and September 1 Rural Carrier Surveys. Through the releases, farmers, processors, and others interested in the livestock industry are provided with timely information that assists them in appraising the current and future prospects for hogs.

Data on beef cattle prices and marketings by classes were collected and published in the monthly agricultural price release.

Poultry and eggs.--Results of the special chicken and egg price survey were the basis for published monthly releases showing egg prices by grades and chicken prices by classes for the State, and average prices by crop reporting district. Information obtained from the survey was used by representatives of the marketing division and Extension Service to encourage marketing of high quality eggs on a graded basis, and by producers, buyers, and others interested in the market price structure of Kansas poultry and eggs.

KENTUCKY

Improving marketing methods and expanding outlets (KY-B-1)

Livestock.--The Kentucky Department of Agriculture continued to assist the livestock industry in adopting improved methods of marketing livestock and livestock products and increasing marketing efficiency. Activities included helping breed associations make arrangements for purebred sales, preparing and distributing informational materials to producers and marketing agencies on good breeding stock, and conducting pork and beef carcass evaluation demonstrations for producers, processors, and marketing agencies.

In addition to these activities, special emphasis was placed on the feeder pig program to establish quality feeder pig sales throughout the State. Producer groups were again assisted in planning and promoting sales of feeder pigs on a graded basis. Promotional activities in connection with the sales included preparing and publishing a buyers' guide for feeder pigs and making radio and TV appearances concerning the sales. The success of these efforts is reflected in the fact that farmers received $2.50 more per hundredweight at these sales than was paid for feeder pigs sold at regular auction markets.

The department also helped plan and organize lamb pools through which graded lambs were marketed and brought from 75 cents to $1.35 per hundredweight above prices received for each grade at other markets.

Fruits and vegetables.--Under this project, activities designed to improve and maintain quality of fresh fruits and vegetables were continued. Specialists held demonstrations on farms and at group meetings illustrating proper methods of packing, grading, and handling such commodities as strawberries, beans, cabbage, potatoes, and tomatoes. Recommendations were made for improving operations of existing packing facilities through use of more modern and efficient handling methods and equipment.

The department also continued activities to expand market outlets for agricultural commodities by publishing and distributing a buyers' guide which provided prospective buyers with detailed information on number of acres produced, quality, variety, approximate harvest dates, and location.

Poultry and eggs.--Kentucky egg marketing specialists worked with producers, wholesalers, and retailers in an effort to increase consumption of and expand outlets for poultry and eggs. In addition to holding egg grading and handling schools, specialists visited about 300 individual farms, grading plants, and stores and staged demonstrations in proper grading, handling, and merchandising.

The department specialist worked closely with the Kentucky Poultry Improvement Association, Kentucky Poultry Federation, and the University in coordinating egg promotional efforts which resulted in having March designated as Egg Month. Publicity material was prepared and distributed to all newspapers and radio stations, and the promotion campaign received a great deal of news coverage in Kentucky and adjoining States.

Dairy.--The dairy specialist assigned to the milk quality improvement project devoted his activities toward bringing the pesticide and antibiotic problem to the attention of producers and processors through meetings and news releases. The specialist also was successful in getting an antibiotic and pesticide committee appointed by the Dairy Products Association of Kentucky to work with all State agencies to prevent spraying with objectionable materials.

In its activities designed to increase consumption of milk, the department cooperated closely with the American Dairy Association of Kentucky in the June Dairy Month promotion. Through the efforts of many agricultural agencies, local and statewide, it was the most successful June Dairy Month to date. Thirty-three counties held dairy celebrations and attendance ranged from 100 to 5,000 persons.

New basic data (KY-D-1)

Commercial flock inventory.--This project, initiated at the end of the reporting year, has as its objective the collection and dissemination of data on both the broiler and egg production in the State. In order to appraise and establish a continuing survey procedure to cover the commercial segment of egg producers, preliminary work included the setting up of a complete listing of commercial operators by counties. These operators will be visited by enumerators

and information on commercial flock operations will be combined with data obtained by current procedures for small farm flock operations to give more reliable estimates on total poultry production in Kentucky.

Sheep and wool survey.--Work was continued on the Sheep and Wool Survey during the year. All the data collection pertaining to the production and marketing of sheep and wool in Kentucky has been completed, and sections of the survey dealing with sales and cash receipts, sources of price information and special problems for sheep, lambs, and wool have been summarized. Two leaflets reporting results of the summary have been prepared and issued prior to publishing the complete survey results in bulletin form. They are "Market Outlets for Sheep and Lambs in Kentucky," and "Special Problems in Kentucky Sheep Production."

LOUISIANA

Improving quality and expanding outlets (LA-A-1)

Fruits and vegetables.--Activities conducted by the department to improve grading, packaging, handling, and distribution of Louisiana strawberries and vegetables were continued during the year.

In northeast Louisiana sweetpotato growers were assisted in successfully marketing almost 2,500 acres of sweetpotatoes which would have been in serious surplus with the closing, for the season, of the single processing plant in the area.

A concerted effort was made to secure and make available to the area a sufficient supply of foundation and certified sweetpotato seed stock. A survey for the 1960 season indicated that approximately 95 percent of the crop will be from certified or registered seed stock. It is anticipated that the establishment of facilities with complete grading and washing equipment, together with the new crop grown from certified seed, will open a new fresh sweetpotato market for the area.

Specialists also stimulated producers in the area, through meetings on proper grading, packing, and marketing, to plant sufficient acreages of tomatoes to complement a year-round vegetable program. Keeping in close contact with producers and buyers, the specialist assisted in the marketing of about 100 acres of tomatoes in the 5/9 bushel pack. Producers in the area received premium prices for this pack.

Major emphasis was placed on the overall improvement program for marketing strawberries in the southeast area of the State. The project leader worked closely with growers, shippers, and distributors in getting an improved variety of strawberries shipped to market. During the 1960 season, approximately 200,000 crates of these strawberries were shipped in a new type container for which the trade paid an average premium of 50 cents, or a net increase of $100,000 to the growers. This important shift to modern packaging has increased interest by leading distributors and retailers throughout the country in handling Louisiana strawberries.

Dairy.--Monthly and annual summaries of utilization of milk and milk products were compiled and distributed to approximately 4,000 producers, milk plant operators, county agents, and other interested persons. The Louisiana department also served as a clearing house for the milk industry by making available current information on the supply and demand situation existing in all areas of the State. The availability of this information enabled the department to assist in the inter-handler movement of milk and in the movement of milk from surplus to deficit areas.

Producers and milk plant operators were assisted in organizing bulk tank routes, and in increasing plant efficiency through improved butterfat sampling and fat control procedures.

The Louisiana dairy project has helped expand market outlets for Class I milk. As a result of assistance provided by the department in moving approximately 4 million pounds of milk utilized in Class I rather than Class II products, producers realized an increase of about $110,000 for their milk.

General.--The department representative continued to provide advisory assistance on site selection, market trends, and industry relations to the Board of Directors of the proposed New Orleans Area Terminal Market. During the past year, the Board selected the site for the new facility and engaged the services of architects and engineers.

Improving marketing methods and expanding outlets for poultry and eggs (LA-A-2)

The Louisiana department continued its program to improve poultry and egg marketing by assisting producers, processors, and retailers in proper techniques of handling, grading, and merchandising eggs. Many of the producers selling direct to retail markets were also advised as to proper cleaning methods and suitable packaging material for egg cartons. One producer supplying a grading station with 150 cases of eggs per week was assisted in determining the cause of excessive checks. The breakage in lots of eggs he had been delivering was amounting to about 15 percent, compared to the 3-5 percent level allowed in Grade A eggs. After adopting the recommended changes in equipment and handling procedures made by the marketing specialist, his breakage rate dropped to 3 percent.

Department specialists assisted plant managers in instructing egg graders in grading techniques. In plants qualifying under the department's "Grade Label Program," graders are licensed and supervised by the department and plants are entitled to use the official insignia on their cartons. Processors were also advised about new types of cartons and other packaging material and assisted in the selection of brand names, carton designs, and advertising material. The project leader helped a number of processors with plant layout problems, in selecting proper equipment for efficient operation, and in locating supplies and securing market outlets.

Work with retailers included assistance in orderly buying, proper storage, display and advertising. The department was instrumental in assisting the egg industry in organizing a Louisiana Egg Council, which will work with other State agencies in maintaining quality and promoting the consumption of eggs.

Disseminating special market information for Louisiana products (LA-B-1)

To assist producers in marketing commodities that may be lost or sold at distress prices because of surplus crops or lack of outlets, the monthly "Produce Availability Report" furnishing information on availability, location, and quantities of commodities was again published and distributed to prospective buyers, dealers, distributors, and terminal markets. This monthly report was also provided trucking firms and the State weighing stations who aided in distributing copies to buyers and dealers.

Improving facilities, handling, and transportation of agricultural products (LA-C-1)

The department specialist, through meetings and personal visits, emphasized to strawberry shippers the importance of proper handling and shipping practices, which resulted in considerable reduction in shipping loss complaints. Strawberry growers in the area also were assisted in the transition from a 24-pint wirebound crate to the 12-pint corrugated flat for shipping fresh berries to market.

In all cases where railroad depots and freight lines filed intentions of discontinuing operations of rural railway stations and servicing freight truck lines, the specialist worked with local authorities and appeared before the Louisiana Public Service Commission in opposition to the closing of these facilities when they affected or were a deterrent to agricultural marketing. There are no known cases of discontinuing operations of existing facilities affecting shipments of agricultural commodities, and in two instances railroad agencies dropped closure plans.

Improving efficiency of cotton gins (LA-C-2)

The rapid conversion to mechanization in cotton gins required the specialist on this project to provide continuing assistance to gin operators in the selection, installation, and operation of new and modern machinery. Most of the cotton gins in operation during the year were visited at least once, and operators given such service as was necessary for improving operations. Work also was started on proper methods of yard grouping, grouping of machine-picked and hand-picked seed cotton, and the implementation of a moisture meter program in the grouping of cotton intended for specific gins. A saving is being realized by the ginners grouping cotton on the yard by moisture and foreign matter content since fewer adjustments in drying and cleaning equipment are necessary.

The department encouraged the USDA-Smith-Doxey Cotton Service in preference to the old hog-round method. It is estimated that approximately 95 percent of Louisiana cotton will be classed by the Smith-Doxey method, an increase from 70 percent in 1958.

A pamphlet listing the names and locations of all cotton gins, oil mills and cotton seed delinting plants, was published and distributed to cotton gin equipment manufacturers, cotton gin organizations, cotton oil mills, and government agencies.

Disseminating special market information (timber products) (LA-D-1)

Of tremendous importance to the small timber producers in Louisiana is the Quarterly Timber Report, prepared and issued by the department. Prior to the inauguration of this service, average producers had little information available on the relative value of such products as stumpage, poles, sawlogs, and pulpwood. The report provides current prices paid by the various timber using industries for specific items on an area basis. This information enables producers to market their products at the current prices prevailing in their area and to compare prices they receive with the State average. Written requests for the timber products report have increased more than 15 percent over the previous years with a large percentage of the total requests coming from States other than Louisiana.

MAINE

Expanding market outlets (ME-B-1)

Potatoes.--In cooperation with the Maine Potato Commission, the Maine Department of Agriculture continued its promotional efforts to improve distribution methods to expand outlets for Maine potatoes. During the 1959-60 marketing season, specialists visited 243 cities in 27 States and the District of Columbia. Brokers, wholesalers, retailers, and institutional users were assisted in developing plans for promotional campaigns.

Following routines perfected through experience gained from previous work under this project, specialists visited terminal markets prior to scheduling promotions to observe quality of Maine potatoes being received. Any unusual conditions regarding package or product were relayed to shipping point packers. Retailers and produce merchandisers were contacted about the quality program and furnished with point-of-sale material provided by the Maine Potato Commission. The specialist also assisted retailers in conducting produce merchandising schools, in scheduling promotions, arranging tie-in advertising and selecting advertising media.

Many requests for information regarding the program were received from organizations in Maine and in other States, where similar promotional programs are being planned.

Within the State of Maine the department assisted the Potato Commission in the preparation and execution of an advertising campaign for 13 markets; cooperated with the Commission, Extension Service, Grocers, Hotel and Restaurant Association, newspapers, radio, and TV in planning and conducting the annual "Maine Potato Week;" and worked with grower cooperative groups in establishing and merchandising a premium pack of potatoes under the State of Maine Blue, White, and Red Trademark. In addition, representatives of the department prepared exhibits and conducted demonstrations at agriculture and trade shows at which information was provided on varieties, grades and types of potatoes, including the introduction and promotion of potato flakes, appeared before industry groups and on radio and television programs, and participated in all advertising and planning sessions of the Commission.

Poultry and eggs.--Work under this project to improve proper merchandising of eggs at the retail level and to increase the volume of eggs packaged under the quality Blue, White, and Red Trademark, was continued. Producers, receivers, wholesalers, retailers, and restaurant and hotel operators were informed of changes or improvements in candling, handling, packaging, and marketing of eggs. A series of egg candling and grading schools was again conducted throughout the State for producers and receivers. During the year wholesalers, retailers, and institutional operators were provided information on best buys in egg sizes and in the proper methods of holding eggs to maintain quality. The results of this service work is evidenced by the increased interest of producers and retailers in maintaining egg size and quality at the retail level. In cooperation with retailers, demonstrations using a portable egg candling booth were held in retail stores to inform consumers of various egg grades, sizes, use in menus, care in the home, and identification in the retail stores.

During the year, the department enlisted the cooperation of table egg producers and first receivers in four marketing areas of the State in supplying egg prices on a bi-weekly basis. This information was assembled and published in daily newspapers under headings of "Prices Paid to Producers by First Receivers," for Grade A case lots, and "Prices Paid by Stores" for Grade A case and Grade A carton lots, and was supplemented by a weekly market news service report covering egg prices for the New England area. Publication of this information makes available to the egg industry a more accurate report of supply and demand and resulting price differentials in different areas of the State and New England.

The principal activity to promote increased consumption of poultry packed and sold under the State of Maine Blue, White and Red Trademark continued to be the arranging and conducting of backyard and organization-type chicken barbecues. Marketing service personnel presented detailed instructions on barbecue procedures to various service clubs, civic and religious organizations. Marketing specialists again conducted "store barbecues" in cooperation with retailers, and distributed copies of the popular booklet "Maine's Own Chicken Barbecue."

In cooperation with various State agencies and processors, marketing specialists assisted in an effort to increase the consumption of chicken by establishing a "portion control" program under the School Lunch Program throughout the State and in conducting barbecue demonstrations for 120 camp operators and counselors.

"Maine Barbecue," a wide-screen theatrical short subject which the department produced and released to New York and New England audiences is still being shown to large audiences. This film was designed to stimulate chicken barbecues in metropolitan areas where Maine has an important share of the broiler market, and has been shown 11,282 times in 1,515 theaters to audiences totaling 2,349,232 people, as of July 1, 1960. It has also had 162 free showings on television to an estimated 7,500,000 viewers.

The department continued to provide the New England Crop Reporting Service with information on the Maine poultry industry, and continued to prepare and publish the weekly Maine Poultry Market Information Report containing weekly

inventories, production, destination of production, farm situation, farm prices, and production eviscerated.

Red meats.--A series of meat-cutting, packaging, and merchandising demonstrations was conducted for wholesalers, retailers, and food locker meat cutters in several parts of the State. The marketing specialist also appeared on radio and TV programs in conjunction with these schools.

Milk.--Activities were continued to encourage increased consumption of milk in schools and nonprofit summer camps eligible to participate in the National School Lunch and School Milk Programs. Information obtained from reports compiled by the Maine Department of Education indicated that school milk consumption in 1960 increased by 1,476,455 half pints over 1959. Forty-one new schools enrolled in the milk program this past year and the total participating camps increased to 55. In 1960, a weekly increase of 12,295 half-pints of milk was reported by the schools using milk vending machines.

In addition to promoting milk consumption in schools and camps, the department staff, in cooperation with Maine Dairy Council, milk industry groups and others, was instrumental in planning, arranging, and participating in the June Dairy Month promotion. In meetings with various civic, educational and professional groups, marketing specialists demonstrated and explained the milk program and distributed printed promotional material furnished by the Dairy Council.

Apples.--Work was continued to assist growers, wholesalers, and retailers in improving handling and merchandising of Maine apples. Highlights in promotional activities included setting up a special display at the Maine Retail Grocers Convention and making information, bulletins, and point-of-sale material available to the retailers; participating in radio and TV programs, and discussing the availability and versatility of apples; and preparing news releases and editorial material for food editors of Maine newspapers, the Restaurant and Hotel Association, and directors of school lunch programs.

A statewide promotional effort was carried on in cooperation with growers, wholesalers, and retailers to stimulate sales of McIntosh apples early in the marketing season. Cooperating with the Maine Extension Service, the department conducted a series of apple grading schools for growers and packinghouse personnel. A handy pocket guide on apple grades was published and made available to the packers for easy reference at time of packing.

Other commodities.--Promotional assistance and guidance in the development of better handling and merchandising methods were continued on dry beans, maple syrup, blueberries, and cream style corn.

Improving marketing efficiency (ME-C-1)

In cooperation with a chain store organization whose members operate small to medium size retail stores, the department provided assistance in the designing of new installations, remodeling existing facilities, and introducing better and more efficient work methods in the receiving, preparation, and displaying of produce. The marketing specialist assigned to this project assisted one store in setting up the produce department after the store had been enlarged by

suggesting more suitable space to include trimming and packaging and providing adequate garbage and refuse disposal facilities. Pricing and display practices were improved and a strict policy of policing displays instituted. As a result the entire produce department is more efficient, less handling is involved, and the quality of produce being displayed has improved. Produce sales for the first month of operation under the improved program were more than double the corresponding months the previous year, and this trend has continued.

MARYLAND

Improving grading and handling methods for grain and soybeans (MD-A-1)

During the year a survey was undertaken in Maryland to determine progress made in eliminating weight difference of grain and soybeans between shipping point and terminal market. This survey was a follow-up of a previous controlled study of all handling procedures between the two points with recommendations for improvement in handling operations. The specialist assigned to this project accompanied terminal car inspectors, and recorded car identification number and defects noted by the inspector for cars originating on the Eastern Shore. The Baltimore Chamber of Commerce furnished elevator weights of the cars. Weight comparisons were made and inspection reports were matched with losses. Results of the surveys showed the terminal weights and shipping point weights compared very favorably. One dealer who last year filed claims for short weight on 150 of 200 cars shipped into Baltimore, this past year with about the same number of cars shipped had 2 claims.

Further study was given the problem of difference between soybean grades at shipping point and terminal markets. The slight differences were not large enough to change the grade but large enough to cause a discount. It was concluded this problem was caused by terminal market dealers insisting on buying from country dealers on the basis of terminal weights and grades. Country dealers and terminal buyers were urged to market soybeans on the basis of shipping point grades.

The regular survey of assisting grain dealers in calibrating moisture meters was continued. Machines were checked before the wheat harvest and again before the corn and soybean harvest at 5 locations throughout the State. In addition, meetings were held with producers and dealers on grain and soybean marketing problems, and demonstrations were held for producer groups on proper techniques of making moisture tests. Individual dealers were assisted with expanding facilities, checking efficiency of driers, demonstrating proper use of grain grading equipment, and in proper loading of cars.

Providing assistance and service to canning and processing plants (MD-A-2)

Past studies in the vegetable processing industry and numerous manufacturing industries have shown that statistical quality control is an effective means of upgrading quality which simultaneously increases efficiency through elimination of trouble spots uncovered by the control process. To assist the Delmarva broiler industry in meeting inter-regional competition, the Maryland Department of Markets initiated a program of statistical quality control in poultry processing plants. As a first step toward raising the quality level of Delmarva

broilers, the principal defects and causes for downgrading in individual plants and the peninsula as a whole had to be determined. Armed with this information, processors were then able to eliminate defects by tracing their origin to a plant or farm operation. This process allowed plants to check their own progress in eliminating causes of defects and in increasing the percentage output of Grade A birds.

To carry out this program sampling techniques and a grade factor sheet for the collection of data were developed in cooperation with Delmarva processors and graders. Five processors representing geographic locations of the peninsula were chosen for the study. In the data collection sheet furnished plant management anything that was considered a quality problem was included, even if it was not a U.S. grade factor. Statistical analysis of the final computed data showed a coefficient of determination of .9622, indicating that at least 96 percent of all downgrading could be attributed to factors on the data sheet. The selected sampling tehcnique of examining every 10th bird on the New York dressed line provided a good representation of the universe and allowed the grader adequate time to evaluate each sample bird and indicate any quality defects to the recorder. Two hundred and thirty-two samples, representing a total of 2,088,000 birds were taken in the 5 plants over a period of 12 weeks with actual data on 23,200 individual birds gathered by 100 bird samples. Each sample usually represented an individual flock.

These data were organized, machine tabulated, and analyzed. A description of the work and the results of these analyses were published in "Statistical Quality Control Methods for Broiler Processing Plants."

Although follow-up work was not completed, all 5 plants adopted the data sheet to some extent. Three of the 5 plants (with a 5-day week capacity of 600,000 birds) were utilizing the sheet extensively along with 2 other plants not included in the initial study. The principal quality defects on Delmarva poultry have been pinpointed to allow a concentrated effort on their elimination.

A formula for estimating yield was calculated utilizing condemnation rate, and data collected for a formula calculating percentage downgrade by using simple enumeration of the 4 or 5 principal defects.

As a result of quality defect data, one plant has replaced its defeathering machine to eliminate bloody wingtips. Another is working toward elimination of procurement bruises by correcting its present hauling batteries or discarding them entirely.

Improving the marketing of fruits and vegetables (MD-B-1)

Fruits and berries.--Assistance given Maryland apple growers and shippers resulted in the development of a more uniform size apple pack and raising the minimum weight to an average 42 pounds. The new apple pack met with very favorable acceptance by the produce trade in both domestic and export shipments.

Several industrywide meetings were held for formulating new cannery apple grades and new tentative standards prepared which were used for last year's crop.

The use of the new standards should give the growers of better quality apples a higher net return from orchard run fruit.

Other activities carried on during the year included assisting Eastern Shore apple growers in evaluating the extent of fruit damage after hurricane Donna and in grading and marketing the crop.

The Maryland Apple and Peach Graders' Manual, prepared to improve accuracy of peach and apple grading, was distributed to about 200 interested fruit growers in Maryland and other States.

Strawberry growers were assisted in formulating working plans for their marketing season. In addition, the department's annual strawberry letter was prepared and mailed to 75 large wholesalers, informing them of berry prospects, varieties, and estimated time of harvest.

At the request of potato growers interested in expanding their markets to processing channels, the department assisted in making specific gravity tests on potatoes.

Improving methods of grading and marketing livestock and wool (MD-B-2)

The marketing service project designed to assist livestock producers with grading, sorting, and organizing livestock sales was continued in cooperation with State and Federal agencies, livestock organizations, meat packers, transportation agencies, and other marketing agencies interested in marketing livestock. The establishment of organized feeder cattle sales, feeder pig sales, wool pools, and slaughter lamb pools provided an incentive to livestock farmers to do a better job of marketing livestock and wool on a graded basis and also increased returns to producers for livestock sold through the pools.

During the past year, the following organized sales and pools were held:

Type of sale	Number of sales
Feeder calf and cattle	2
Feeder pig	8
Slaughter lamb pools	5
Wool pools	2
Wool pick-up stations	5

In all the sales, the prices received by producers were higher as compared with farm sales or when animals and wool were consigned to marketing agencies.

Beef cattle.--A total of 2,430 cattle were sold through the two sales of feeder calves and feeder cattle held during the past year. Many news articles relative to the program were prepared and released to radio stations, daily and weekly newspapers, and farm magazines.

Swine.--The heavy demand for feeder pigs in Maryland and neighboring States was partially responsible for producers' interest in marketing pigs as feeders. Also farmers who do not have facilities and capital to feed hogs

to slaughter weights can sell pigs as feeders and realize prices relatively higher than those for slaughter hogs. In the 8 demonstrational feeder pig sales conducted in cooperation with the swine producers and the University of Maryland, a total of 5,034 feeder pigs were sold at premium prices.

The department of markets continued its efforts to emphasize the importance of marketing meat-type hogs. In cooperation with swine producers, 6 grading demonstrations were held throughout the State, and in two instances carcass grading demonstrations were held in connection with the live grading. Department personnel also participated in 3 regional and 3 statewide hog shows which afforded an opportunity to make live comparisons of the type of hogs produced and to encourage producers to select breeding stock which will increase lean-type hogs. Numerous visual aids such as slides of meat-type and lard-type hogs, models, charts, and pictures were used in various meetings throughout the State in encouraging the production of meat-type hogs.

Wool.--The wool program under this project was continued. Prior to organizing the sales, area meetings were conducted to discuss the production and marketing of quality wool, including proper time to shear; preparation of fleece for market; and proper storage, handling, and grading. The second phase involved the establishment of pick-up stations and arranging for delivery points. Upon arrival at the designated points, the wool was graded, bagged, and shipped or trucked to the buyers. Over 100,000 pounds of wool was sold in 1960 through the pools with producers receiving increased returns for their wool.

Lambs.--In order to assist farmers in marketing early lambs, slaughter lamb pools were started in the spring of 1958 and continued each succeeding year at the request of sheep producers. During 1960, 820 lambs consigned by 27 producers were sold at premium prices through the lamb pools. An important aspect of the lamb pools is the fact that producers have been encouraged to breed their ewes at an earlier date and to market lambs prior to May 1, when lamb prices are highest. After that date prices decrease about $2 per hundredweight and farmers assume added risk of death losses through worm infestation and weight losses incurred by keeping lambs on the farms during hot weather.

Livestock conservation.--At the request of the livestock industry, the livestock conservation program was continued. Illustrated talks on the handling of livestock from the farm to the packing plant were implemented with special radio programs, news releases, and exhibits. The importance of the livestock conservation program is evidenced by the fact that in the past 11 years injury losses in truck shipment of livestock have declined nearly one-half while total volume hauled by truck has increased one-third.

Improving basic data and marketing information (MD-D-1)

Tobacco.--During the year the department completed a random sample survey of over 100 southern Maryland tobacco farms to secure basic data on estimates of Maryland tobacco production. Procedures of the survey included visiting sample farms to obtain plant count within measured areas of sample fields after which the plant numbers were tabulated and expanded to plants per acre. In the winter and early spring, samples of tobacco were weighed on each farm to determine average net weight of tobacco per plant. Using the computed number of

bearing tobacco plants per acre and average net weight of cured tobacco leaves per plant, an estimated yield per acre was obtained for each sample farm. These yields were used to compute average per county and expanded to arrive at a State production figure.

Since the production estimates obtained from the random sample survey tended to be high for every county, further revision of sampling procedures will be made for smaller farms.

MASSACHUSETTS

Maintaining and improving quality of dairy and other agricultural products (MASS-A-1)

The Massachusetts Milk Flavor Program was continued to help producers and distributors in determining causes of off-flavors in milk and in correcting conditions responsible for them. Through the cooperation of FFA chapters in a number of schools, students assisted in conducting flavor panels for testing producers' samples of milk. Producers and plant operators in 9 separate marketing areas of the State were provided with regular monthly reports of the flavor quality of their milk. A total of 5,430 samples of milk were scored during the past year compared to 3,346 samples scored the previous year.

The spot-checking of milk in retail stores was continued on a limited basis in areas of the State not previously covered. The department received many requests from plants and producers with unsatisfactory scoring results for assistance in correcting the causes of off-flavor. Specialists helped personnel of one plant operating as a cooperative to establish a flavor program in the plant. Dealers operating out of this plant had received numerous complaints from their customers of unclean or fruity off-flavors in milk. On one occasion after the processed milk was scored as fruity, approximately 2,000 quarts of raw milk remaining in the holding tank from that shipment was dumped. The strong fruity defect caused by psyschrophilic bacteria normally takes 4 days to develop but in this case poor refrigeration and handling on the farm caused this off-flavor to develop within 48 hours. This flavor trouble caused the loss of several customers among the dealers and was not eliminated until all 32 farms supplying the plant had been checked and the cause corrected.

The specialist working on this program also helped other producers and plants in uncovering and correcting sources of off-flavor in milk caused during processing, storage, and distribution.

Providing new basic data for vegetables (MASS-D-1)

Data made available under this project provides growers, marketing agencies and others with current information on the production and marketing patterns for Massachusetts vegetables. The crop report contains local data on distribution of acreage by crops, planting intentions, harvested acreages, yield and production, and prices received and value of production. A number of studies have been undertaken to project trends and chart recommendations for growers. During the past year the reports were distributed throughout New England to encourage regional planning in research, marketing and production programs.

Plans are being made to implement the crop reporting service by developing an informational service under which vegetable buyers throughout the State will be furnished with information on location, quantities, varieties, and prices of various crops.

MICHIGAN

Developing methods of certifying virus-free nursery stock (MICH-A-1)

Work was continued under this project to improve certification procedures for establishing a virus-free source of propagating stock for commercially important varieties of fruits grown in Michigan.

Cherries.--As a result of project activities directed toward the securing of virus-free cherry scionwood sources and the distribution of this source material to cooperating nurserymen, the cherry certification program will be under regulation next year. This regulation provides for the registration and inspection of cherry scionwood orchards, understock seed source trees, and cherry nursery stock and provides for the annual indexing of scionwood sources to insure continual virus-freedom.

Since the program's inception, virus-free nursery stock has been made available for all cherry varieties of basic commercial importance in Michigan. Over 175,000 virus-free sweet and red tart cherry buds were distributed to cooperating nurseries bringing the total distributed since the program started to over 1,500,000. Fruit producers have realized accrued dividends which result from the growing of virus-free nursery stock and are now demanding such stock from their nurserymen.

Strawberries.--Under the program for certification of strawberry nursery stock, varieties are indexed for virus freedom and increased in number for sale to cooperative nurseries. This past season 250 plants of 17 varieties were grown and indexed and 10 varieties were being increased for use as foundation stock next season. The number of plants sold last year as certified virus-free ran in the millions and cooperators reported that demand for virus-free stock exceeded current supplies.

Peaches.--Since most virus diseases of peaches in Michigan are striking in effect upon infected trees, visual inspection of scionwood trees is sufficient so that a certification program as complex as those for cherries and strawberries is not presently necessary for peach tree nursery stock. This past season, 10,000 peach trees, 2,000 nectarine trees, and 650 apricot trees were approved as virus-free scionwood sources.

Blueberry, bramble fruit, and pome fruits.--The need for a certification program for blueberry scionwood block was established and tentative proposals have been made to initiate the necessary certification program as soon as funds and facilities become available. Virus-free selections of certain bramble fruit varieties have been set out and attempts will be made to determine the feasibility of bramble certification and the requirements necessary for such a program.

Although the need for certification programs for pome fruits has not been evident in Michigan, reports of virus contamination in other States have alerted the Michigan Department of Agriculture to the possibility of establishing such a program. Thus far, in cooperation with Michigan State University, preliminary efforts have been made in searching for suitable indexing hosts, and limited surveys undertaken to determine severity of virus incidences in Michigan orchards.

Improving and maintaining quality of agricultural products (MICH-A-2)

Department specialists continued to work with peach growers through demonstrations and personal visits to encourage grading and packing of U.S. No. 1 peaches to increase the volume of graded peaches sold over the Benton Harbor Market. A peach marketing survey conducted in 1959 pointed out that it would be profitable for peach producers and packers to pack and grade U.S. No. 1 peaches until the price differential between U.S. No. 1 and Unclassified peaches was equal to the cost differential for packing and marketing the two packs. The report was distributed to producers and packers before and during the 1960 peach marketing season and the recommendations therein, together with the grading demonstrations, prompted many producers to pack a greater volume of U.S. No. 1 peaches.

Potatoes.--During the year a program was initiated to increase the consumption of Michigan potatoes through emphasizing quality control practices, promotional activities and better merchandising practices. Surveys conducted in cooperation with the Extension Service revealed that consumers desired greater uniformity of size within a pack and would be willing to pay the additional cost required for sizing. After being presented with these findings, a local packer and retail chain agreed to cooperate with the department in conducting a project to merchandise a portion of the volume handled by the packer on a uniform size basis. These potatoes were marketed for a six-week period, and although it was not possible to determine the increase in consumption, data obtained from the stores indicate that a definite market exists for uniform size potatoes. Michigan producers and marketing agencies stand to realize greater returns on the same total volume even if total potato consumption is not increased.

In a further effort to promote and expand markets for Michigan potatoes, contacts made by department personnel with several potato dealers resulted in finding a new out-of-State outlet for approximately 8,000 tons of potatoes annually.

Apples.--To determine the cause of apples being out of grade at retail stores, studies were made on handling and storage practices at various trade levels. Grade-out tests conducted at packinghouses revealed that most of the skin breaks and bruises which resulted in quality loss were caused during packing operations. The results of these studies were discussed with the Michigan Apple Council and passed on to growers and packers through group meetings and individual contacts. Department personnel also worked directly with some of the major packers in improving handling and packing operations.

Eggs.--During the past year contacts were made with several chain store organizations to inform them about the Fresh Fancy Quality Egg program. Through the efforts of the marketing specialist arrangements were made for one chain organization to handle Fresh Fancy Eggs from a Michigan egg marketing firm.

Improving livestock market news information (MICH-D-1)

The project to develop a price-reporting service for livestock was initiated to provide Michigan livestock producers with point-of-sale information on movement of and prices paid for locally produced meat animals. Daily information supplied by 39 of the 49 auctions in the State is analyzed and released through newspapers, radio and television stations. These reports provide livestock producers with reliable information on which to base sound marketing and production decisions.

Providing basic data and special marketing information (MICH-D-2)

Work under this project was concentrated on improving the accuracy of present production and marketing data on apples, cherries, and onions.

Objective methods of obtaining estimates of production were tested for tart cherries in 135 commercial orchards in 1960. Field counts of randomly selected orchards together with the mailed survey estimates resulted in an accuracy of 98 percent in the mid-June estimates of the 1960 cherry crop.

Information obtained on the number of sweet cherry trees by varieties and age groups will be used to measure the extent of large plantings of sweet cherries made in recent years. The data can be used by the sweet cherry industry in increasing efforts to develop new and larger outlets for the expanding production.

Data obtained from the August survey on estimates of apple production by varieties were used by the Michigan Apple Council in advising growers on marketing their crop. Storage, processing, and other marketing plans were formulated on the basis of indicated production for each major variety.

In addition to testing objective methods of estimating onion production, a series of releases was issued on the progress of the Texas spring onion crop to assist Michigan onion growers and shippers in marketing storage onions.

MINNESOTA

Developing methods of certifying virus-free nursery stock (MINN-A-1)

Work under this project to develop methods of certifying virus-free nursery stock was continued. Major emphasis was placed on the stone fruit virus certification program, which now makes it possible for participating nurserymen to market each year about 150,000 certified virus-free Prunus nursery stock. These are special winter hardy plums, cherry-plums, cherries, and ornamental varieties which are distributed largely in the North Central States and in Canada.

During the year, a total of 1,150 individual mother block trees were indexed for necrotic ring spot and other latent-type viruses. These indexings included 350 new mother block trees entered in the program for the first time, 550 trees checked for the final time prior to registration, and 250 registered trees which were rechecked. At present a total of 4,200 mother trees located in 7 of the largest nurseries in the State have been approved as registered propagation sources.

In addition to indexing mother blocks, 500 one-year Prunus dug for sale were indexed and no latent virus was found. This sample is a significant indication that a product essentially free from known injurious virus is being marketed. Certified propagation material made available through this program results in increased bud take, followed by increased growth rate and larger trees of more uniform appearance. Since the price received for nursery stock depends largely on size, the certified stock assures nurserymen increased returns. Another direct benefit is that Minnesota certified Prunus nursery stock can qualify for interstate and international shipment. Prior to the certification program, the market was limited because of regulations and quarantines against certain stone fruit trees or propagation parts unless they were certified as free from virus.

Previously all trees of the very popular Mount Royal plum (Var. of prune) were infested with necrotic ring spot virus disease and all but one of the nurseries participating in the program eliminated Mount Royal when it was proven to be diseased. After intensive searching and testing, a virus-free source of Mount Royal was found and developed, and certified trees of this variety will be marketed for the first time during the coming merchandising season. Now that a clean source has been established, all nurserymen are eager to begin growing the variety again.

Efforts were continued toward identifying the cause of yellow-red leaf virus infesting peach, chokeberry, and certain varieties of plum. About 60,000 trees were observed during the year, and affected trees ranged from 3 percent to 30 percent of some varieties. As soon as corrective measures can be developed they will be incorporated into present certification procedures.

Progress was being made toward a strawberry certification program in Minnesota. Strawberry plants throughout the State were carefully examined to study condition of plants, nursery practices, and methods used by producers. One hundred of the most healthy appearing plants of 7 important commercial varieties were selected as possible virus-free sources. Indicator plants, F. vesca, were obtained and increased in the screenhouse to be used for indexing purposes. This work is being carried on in cooperation with the University of Minnesota Experiment Station.

At the request of nurserymen and fruit growing industries, preliminary work was initiated to study virus diseases affecting other nursery stocks such as apples and raspberries.

Improving quality of agricultural products (MINN-A-2)

Eggs.--Major emphasis under this project was placed on activities dealing with the Minnesota Quality Egg Program. Personnel of the department continued to work with egg producers and dealers in acquainting them with requirements of the certified program, and in conducting egg grading and candling demonstrations for personnel of plants qualified under the program.

During the reporting period personnel participated in 18 Egg Institutes held throughout rural areas in the State in cooperation with the Extension Service. At each event, candling and grading demonstrations were conducted

and the quality program explained. Other activities included the preparation and dissemination of informational material to producers, dealers, and packers on improved methods of handling, cartoning, storing, and transporting eggs.

Producers with nearly 1 million layers, under the quality program are receiving premiums of from 3 to 4 cents per dozen for their eggs.

Dairy products.--During the past year, the mobile laboratory was operated in two areas in northeastern Minnesota which had not been surveyed previously. Forty-one dairy plants in those areas were assisted in evaluating product quality and in detecting and eliminating sources of contamination.

Maple syrup.--Bacteriological surveys and chemical analyses were continued during the maple syrup season to help producers improve syrup quality.

Expanding market outlets for farm products (MINN-B-1)

Apples.--During the past year at the request of Minnesota apple growers and growers in the neighboring area of Wisconsin, a joint market information service was developed to supply growers with information, not previously available, on apple movements, varieties, and prices. The project was well received by the growers who have indicated an interest in continuing the project.

The department again cooperated with the Minnesota Fruit Growers Association in publishing and distributing to buyers an informational report on the quantity, quality, and varieties of Minnesota apples available. Department personnel also prepared and presented apple promotion exhibits at the State fair and at the annual meeting of the State Dental Association.

Dairy products.--Activities in the field of dairy products promotion were conducted in cooperation with the Minnesota Dairy Industry Committee. Efforts were concentrated on expanding consumer acceptance of cultured sour cream. At two area trade shows, personnel of the department featured exhibits and demonstrations of using cultured sour cream as a chip dip and as a dressing. As a result of these promotional activities, local processors and dealers reported an increase in local sales of this dairy product.

Personnel of the department were instrumental in developing plans for a merger of 3 small butter manufacturing plants in western Minnesota. These plants, due to low volume, were about to close, but under the merger plan farmers in a 25-mile radius have an outlet for their Grade A milk.

Eggs.--Promotional and quality improvement work was continued for expanding outlets of Minnesota quality eggs under the Quality Egg Program. Special emphasis was placed on working with dealers on store displays, conducting store demonstrations, preparing county fair exhibits, and furnishing newspapers and radio stations with informational materials.

Honey.--In cooperation with the Minnesota Beekeepers Association, a representative of the marketing division continued activities to assist the honey industry in improving quality and promoting increased use of honey. During the reporting period honey displays were prepared and presented at numerous trade shows and the Minnesota State Fair.

Providing new basic data (MINN-D-1)

Work was continued in developing new or additional marketing information on crops, feeder pigs, milk, sheep and lambs shorn and death losses, wool production, grain in storage, and prices of agricultural products. Information on these subjects was widely disseminated through periodic reports to persons interested in agriculture.

MISSISSIPPI

Improving milk handling methods and expanding outlets for dairy products (MISS-A-1)

The accelerated and steady conversion to farm milk tanks required department personnel to provide continuing assistance to milk producers in the operation and maintenance of the new equipment. During the year representatives visited 993 dairy farms and helped the operators in installing and calibrating milk tanks and demonstrated proper cleaning and sanitizing procedures.

Milk producers throughout the State were assisted in determining and correcting causes of low-quality milk and advised on the importance of marketing milk free of antibiotics and pesticide residues.

Maintaining quality and expanding market outlets for poultry and eggs (MISS-A-2)

The Mississippi Department of Agriculture continued activities to improve grading, packing, handling, storing, and transporting poultry and eggs and assisted in expanding outlets and increasing consumer acceptance of graded poultry and eggs through demonstrations and other promotional efforts.

Specialists continued to make egg quality evaluations at retail stores throughout the State and assisted dealers in correcting storage conditions adversely affecting egg quality. Where tests revealed the quality deterioration to be the producers' or packers' responsibility they were assisted in determining and correcting the condition causing quality losses.

Provisions of the State Poultry and Egg Law and the new State Hatchery Licensing Law were explained to the hatchery operators. The latter law was enacted to prevent recurrence of a hatchery egg program collapse experienced the previous year.

Promotional activities to encourage proper egg grading and quality control procedures included operation of information and display exhibits at major State fairs and other events.

Improving quality and expanding market outlets for fresh fruits and vegetables (MISS-B-1)

Under this project continued assistance was provided growers, handlers, and shippers in improving quality, packaging, handling, and marketing of Mississippi fruits and vegetables.

Producers in one sweetpotato district who depended on peddlers and the local market for their potato outlets, were urged to purchase a washer and grader and to pack, size, and grade according to official standards. By following recognized methods of good marketing practices, about 18,000 bushels of potatoes were moved to terminal markets and growers in the area realized from 75 cents to $1.50 more per bushel than they would have received by following conventional marketing methods.

Under another phase of the project, vegetable growers and shippers in a 10-county area in southeast Mississippi were provided assistance through information on market conditions, market outlets, and proper methods of grading, packing, and assembling loads for truckers. Estimated benefits from this program are as follows:

Commodity	Units	Estimated Sales Price	Estimated increase of savings to producer
	Number	Dollars	Dollars
Leafy vegetables	550 truckloads	220,000	22,000
Peas, butterbeans, squash, okra	10,000 bushels	30,000	7,500
Sweetpotatoes	18,500 bushels	25,500	9,250
Watermelons	125 truckloads	43,750	10,900
			49,650

New basic data and marketing information (MISS-D-1)

In cooperation with Mississippi State University and the Agricultural Estimates Division of U.S. Department of Agriculture, a survey was initiated of cattle feeders in the State. Results of this study will provide for the first time an estimate of the number of cattle and calves on feed, starting and finishing weights by kind, length of feeding period, marketings by grades, feeding practices, sources of cattle for feeding, and sources of grain used for feeding.

The results of the survey of storage capacity on Mississippi farms were published during the year. The survey conducted at the request of and in cooperation with Mississippi State University provides data needed in analyzing marketing problems in connection with the production and marketing of grain in Mississippi.

In process of completion was the publication of all available information on prices received and prices paid by Mississippi farmers. Following publication of these data, the index of prices received will be published monthly and the price series by commodities will be incorporated into the regular annual statistical bulletin.

The preparation and publication of the bi-weekly truck crops reports during season was continued. The report provides current data on crop progress, expected movement, and volume of movement by major producing areas.

The annual county estimates of major crops and livestock in the State were integrated into the regular statistical program.

MISSOURI

Expanding market outlets for agricultural products (MO-B-1)

Fruits.--The department cooperated with the Missouri Horticultural Society this past year in assisting buyers locate fruit of the desired variety, quality, and volume. Contacts were made with 300 outlets in Missouri and other nearby States to provide buyers with this detailed information about the availability of Missouri fruit. In addition to the promotional work with the trade, personnel of the department prepared and maintained demonstrational exhibits relating to the health benefits of apples at conventions of the State Teachers Association and the Dental Society.

An informational brochure on watermelons was prepared and distributed to about 800 buyers. This buyers' guide provided data on location, estimated acreage, varieties, marketing seasons, major loading points, and names and addresses of persons to contact for each watermelon producing county in the area.

Obtaining and providing new basic data (MO-D-1)

The quarterly pig crop report was prepared and released to livestock producers and other interested persons during the year. This report was coordinated with similar reports from 9 other corn belt States and provided producers with information on current pig inventories.

Market price reporting (MO-D-2)

Limited activities were carried on under the project during the reporting period and the project discontinued at the end of the fiscal year. The survey of livestock auction markets in Missouri was completed and actual price reporting on 2 markets carried on for a 12-week period. The report covering this survey was being prepared for publication.

MONTANA

Improving quality of dairy products and eggs (MONT-A-1)

The Montana Department of Agriculture continued the quality improvement work on butter, ice cream, ice cream mix, and cottage cheese. Major emphasis again was placed on bacteriological and organoleptic tests of samples of these products that had been picked up at dairy plants and retail stores. Results of quality determinations were mailed to the respective plant or store and the report also included results of previous tests to enable comparisons to be made of scorings for different periods.

The results of 3,681 quality tests of the various dairy products made during the year indicated a steady improvement in the quality of these products. Below is a yearly percentage breakdown on total samples scored of ice cream, cottage cheese, and butter from July 1, 1955 through June 30, 1960:

Ice Cream

Year	Score					
	93	92	91	90	89	88/less
	Percent	Percent	Percent	Percent	Percent	Percent
1956	8.9	20.5	95.2	22.5	13.2	9.6
1957	4.5	17.8	28.2	20.7	14.6	4.2
1958	9.6	28.0	24.6	19.0	11.5	7.3
1959	13.2	27.2	19.8	28.2	6.6	5.0
1960	25.4	30.6	16.8	17.9	7.0	2.2

Cottage Cheese

Year	Score					
	93	92	91	90	89	88/less
	Percent	Percent	Percent	Percent	Percent	Percent
1956	6.4	27.3	21.0	14.7	15.8	14.7
1957	6.3	27.3	21.0	32.6	13.7	1.1
1958	9.6	28.5	23.0	20.4	12.0	6.3
1959	8.9	29.5	24.2	23.0	10.0	4.3
1960	17.7	32.9	20.3	17.1	8.9	3.2

Butter

Year	Score					
	93	92	91	90	89	88/less
	Percent	Percent	Percent	Percent	Percent	Percent
1956	0	1.2	5.0	36.0	34.3	23.6
1957	0	1.3	5.0	49.8	31.7	12.2
1958	0.6	4.0	12.7	44.1	24.5	13.9
1959	2.1	6.2	14.1	46.4	23.4	7.9
1960	2.2	9.2	15.5	51.7	17.5	3.7

Under one phase of the egg quality improvement program, marketing specialists continued to check refrigeration and other handling practices at the wholesale and retail level that might affect quality of eggs. When eggs were not refrigerated, store managers were encouraged to provide proper refrigeration facilities. As a result of this work the number of stores not refrigerating eggs dropped from 11.6 percent last year to 7 percent in 1960.

The production and marketing of "Gold Seal" eggs under the Montana Quality label is the second phase of the egg marketing program. This is a voluntary program whereby producers meeting requirements prescribed for production, handling, and marketing can use a special "Gold Seal" identification on their cartons. At the present time the 62 producers participating in the program

are realizing a premium of from 3 to 10 cents per dozen over similar grades of eggs not carrying the "Gold Seal" label.

Providing basic data (MONT-D-1)

Information relating to wheat protein and wheat and barley varieties was assembled and published during the year. The data on wheat protein were used to prepare estimates of wheat production for the 32 major producing counties grouped into protein categories of 14.9 percent and less protein and 15.0 percent and more. The wheat and barley report contains information on the 32 counties showing irrigated and nonirrigated acreages for principal varieties and county variety percentages for the year 1955 through 1960. These reports, distributed to growers, handlers, and shippers, provide the grain trade with useful marketing guides, furnish carriers with data needed to determine demand for shipping facilities and keep growers informed on prospective supplies of wheat of various grades and quality.

The monthly report on the movement of Montana cattle to market was continued. This report contains data on current and comparative out-of-State marketings and in-State movements by months, by class, and by States of destination.

NEBRASKA

Providing additional basic data and marketing information (NEBR-D-1)

The quarterly surveys and reports on the Nebraska pig crop and hog inventories were prepared and released as part of the coordinated project of the 10 Corn Belt States. About 5,000 copies of each of the quarterly reports were distributed to farmers and others interested in current developments in the hog situation. These reports furnished information on the probable supply picture in time for making appropriate production and marketing decisions, and were especially important during peak hog production in the spring of 1959. Hog producers in Nebraska and some other States cut back on their intentions for further increases after the June 1959 report indicated another large expansion intended for fall farrowings. Producers also reduced the number of winter litters, followed by a decline in farrowings for the main spring months in 1960.

The September 1 questionnaire was expanded to include questions relating to the average weight and age of hogs and pigs marketed and marketing channels used. The survey form includes questions on sales and purchases of feeder pigs aimed at obtaining location of markets used, number, age, weight, and price of feeder pigs purchased.

Expanding market outlets through improved quality, handling, and merchandising methods (NJ-B-2)

Poultry and eggs.--In connection with the program to expand outlets for poultry and eggs, individual assistance was provided to producers in correcting causes of poor quality. Fieldmen visited 1,148 poultry farmers and demonstrated proper methods of candling, grading, storing, and handling eggs, and encouraged proper refrigeration and sanitary practices. Supplementing activities with producers, quality control programs were carried on with chain stores and milk companies selling eggs. Various types of merchandising and promotional efforts were tested under practical conditions at the wholesale and retail levels. In cooperation with the Extension Service, egg handling and quality conservation demonstrations were again held during the year.

The New Jersey egg merchandising program was supported by a statewide promotional campaign which extended into neighboring States. The foregoing activities have been instrumental in increasing the volume of sales of State Seal of Quality eggs. Although total production of eggs in New Jersey decreased 6.8 percent since 1957 when the program was started, the sales of New Jersey State Seal of Quality eggs increased 218 percent during this same period.

In cooperation with the Poultry Council staff, the department assisted New Jersey turkey growers in marketing native turkeys during the transition period of compulsory inspection for wholesomeness required by both Federal and State regulations. Arrangements were made by the department for the State health authorities to conduct special schools to train turkey growers to qualify as licensed meat inspectors. Representatives of the department also advised the growers on sanitation so that on-farm dressing plants would meet health requirements. The growers who qualified as licensed lay inspectors were supervised by licensed veterinarians who also inspected slaughtered birds. In 1958, when the State regulations were promulgated, only 12 producer-retailers qualified for inspection and 50,000 State Seal of Quality birds were sold, while in 1960, 23 farmers qualified, marketing an estimated 75,000 State Seal turkeys.

Fruits and vegetables.--Much of the work carried on during the year with the asparagus industry was in cooperation with other State agencies to encourage grower acceptance of new official standards for size and quality of fresh market asparagus, and new specifications for processing asparagus. The State Board of Agriculture recently promulgated regulations increasing spear diameter for fresh market State Seal of Quality asparagus and revised size designations. In this connection, meetings with growers were followed by on-farm visits to leading producers. Metal sizing templates were supplied growers by marketing organizations and were used to train packinghouse workers, as well as to check compliance in marketing channels.

Representatives of the department continued to work with shippers and receivers in the New Jersey, New York, and Philadelphia areas in improving merchandising methods for New Jersey asparagus. Visits also were made to markets in Richmond, Pittsburgh, and Boston to explore the possibilities for distributing and merchandising New Jersey asparagus in those areas. At the retail level,

spot checks of asparagus quality were made and recommendations on maintaining quality given produce managers. During these store visits representatives assisted operators in making the most effective use of display material provided by the Asparagus Council.

The result of these activities can best be illustrated by the fact that in 1958, a year before the asparagus quality improvement and merchandising program was started, the average price for New Jersey fresh market asparagus was $3.36 per crate. In 1960, the average price per crate was $3.93, although the supply did not vary appreciably during the 3-year period.

Activities were continued to encourage the marketing of New Jersey potatoes under the State Seal of Quality program. Fieldmen visited 157 potato farmers in an attempt to overcome reluctance on the part of some growers to change their operations in order to improve methods of grading, handling, and packaging to provide quality potatoes meeting State Seal of Quality requirements. Preliminary results of a farmer survey conducted in cooperation with the Extension Service and the Potato Council indicate that New Jersey potato growers are becoming interested in making the necessary changes in their operation to insure the effectiveness of the potato promotional program. Throughout the reporting period, growers and packers were urged to grade, wash, and package potatoes to improve attractiveness, and two of the large grower-packers were assisted in finding market outlets for their washed products. One large group of stores ordered washed potatoes for all its units.

Grading potatoes to meet trade demand and the 2-inch minimum size required for official inspection has been accepted by leading growers and packers. Twenty-five dealers and producer-dealers are currently licensed to pack State Seal potatoes.

The department helped the Apple Industry Council develop plans for a study to determine causes of apple bruising during transportation. The project will be carried on by the Agricultural Experiment Station and the results will be coordinated with information on related matters as part of a larger project to establish a store-door delivery marketing system. The work in 1960 was aimed at increasing the number of participating stores, obtaining acceptance of early hour deliveries, developing economical returnable master containers, and establishing a price differential between store-door and warehouse delivered apples. Future studies will involve reduction of delivery costs and increase in sales per store. The development of a store-door program for the entire apple marketing season should spread costs between high and low volume varieties.

Under the New Jersey Certified Farm Market program of selling quality farm commodities in an attractive manner using ethical business practices, fieldmen continued to provide assistance to the 35 operators of markets certified under the program. During visits to the markets, observations were made of facilities from a consumer's viewpoint, i.e., highway approach, signs, attractiveness of surroundings, parking areas, and related matters. Within the market proper the fieldman checked on sanitation practices, refrigeration, displays, pricing, and packaging. Findings of the individual visits were discussed with the operators and, when necessary, recommendations were made for improving marketing methods.

Many operators of roadside markets not participating in the program have requested assistance from the department in their operations and more than 100 farmers operating stalls in the Trenton Farmer's Market are participating in a modified form of the program.

Providing new basic data and marketing information (NJ-D-1)

Two special reports, based on enumerative surveys of commercial flower and plant growers, and growers of nursery stock were published and distributed during the year. The first report, "New Jersey Flowers and Plant Production," contains information gathered from 592 commercial growers of cut flowers, plants, bulbs, corms, and tubers in New Jersey on location, acreage, value of physical holdings, types and location of wholesale outlets, and sales. The second report entitled "New Jersey Nursery Production" contains basic data on production and sales of nursery stock grown in producers' own nurseries, as well as information on nursery products purchased from other nurseries within New Jersey and other States.

The format of the New Jersey Truck Crop News report was completely revised, and includes statistics on marketing by products, both current and potential, based on historical data.

Other activities carried on under the program of providing new and timely basic information on New Jersey agricultural crops resulted in the issuance of the following reports: New Jersey Agricultural Statistics 1958-59, Meat Chicken Report, Blueberry Report, Turkey Report, Apple Variety Report, Annual Poultry Summary, Annual Dairy Summary, and the Annual Livestock Summary. Special monthly reports were prepared for fruits, potatoes, and vegetables.

NEW MEXICO

Maintaining and improving the quality of poultry and eggs, fruits and vegetables, and other agricultural products (NM-A-1)

The New Mexico Department of Agriculture continued to work closely with egg producers, retailers, and wholesalers in proper farm storage, grading procedures, refrigeration, and transportation to maintain egg quality throughout the marketing channel. Information obtained from inspection records indicates that this work has improved the quality of eggs being sold in the State.

Work was continued with large egg packing firms, wholesalers, and retailers in improving handling procedures in an attempt to reduce the high percentage of damaged eggs found at the retail level. In connection with this work, department personnel demonstrated the importance of proper cooling facilities for retail display and the need for rotation of stocks.

The quality improvement program for fruits and vegetables was continued in close cooperation with the Experiment Station and Extension Service. Marketing specialists assisted lettuce and onion growers in proper methods of grading, packaging, loading, and refrigeration. For example, despite a depressed onion market during the past year, only about 2 percent of the onions did not meet

quality specifications and were refused on arrival at destination. In some past years, as much as 10 percent of the onions shipped from the area were refused. This increase in quality and resultant decrease in losses to producers can be attributed to the marketing service work carried on under this project.

Expanding market outlets for agricultural products (NM-B-1)

In an attempt to combat low egg prices by expanding sales and thereby increase profit margins for individual producers, marketing personnel of the department initiated a consumer promotion program aimed at promoting the sale of high quality locally produced eggs. With the aid of the Extension Service, radio and newspaper personnel, and the cooperation of retailers, the promotional efforts resulted not only in eliminating surpluses but also in creating a demand above the available production in the area where the program was carried on. Producers estimated their sales in this area were increased by 25 percent during the period of this promotion.

The department was instrumental in developing arrangements between lettuce growers and shippers to reduce "red ink" sales, the losses from which had in the past been suffered entirely by growers. Lack of an adequate marketing information service had been partially responsible for this situation. The establishment of such a service was one of the most important factors accounting for the improvement in lettuce marketing and reduced losses from consigned shipments in 1960.

Fruit and vegetable buyers and distributors were again provided with a brochure showing the location of fruit and vegetable areas, varieties, quality, and quantities available. At the request of one distributor in a neighboring State who had received a copy of the brochure, a department specialist assisted in locating a supply of potatoes and in making contract arrangements for annual future supplies.

NEW YORK

Providing market information and expanding market outlets for agricultural products (NY-B-1)

Potatoes.--At the request of the Long Island potato industry the New York Department of Agriculture and Markets helped avert the possibility of a market crisis during a normally slow movement period, compounded by the loss of an export market which had accounted for from 6 to 10 percent of the total Long Island potato crop.

Department representatives met with industry groups and, together with grower, packer, and shipper organizations, acting as the Long Island Potato Week Committee, carried on a potato promotion and marketing program that was an outstanding success. Promotional activities of the department and the Committee included working with growers, packers, shippers, and retailers to encourage a superior marketing job, official proclamation of Long Island Potato Week, potato exhibits at State fairs, publication of news releases and special

feature articles, and distribution of press kits to food editors, and radio and television stations. Not only did the industry make up the export loss of about 170,000 hundredweight of potatoes plus move an additional 27,000 hundredweight over the total for the previous year, but this volume was sold in smaller shipments, thus effecting a much wider geographic distribution of Long Island potatoes which may be of value in future market development work.

The Empire State Trademark program for potatoes was continued and served as a valuable leader to stimulate interest among growers and packers in improving quality, handling procedures, packaging facilities, and merchandising methods. More and more buyers are demanding potatoes packed to specification of the "label" grade. In connection with the potato promotion program, department specialists at the annual Horticultural Society Trade Show conducted for the first time "on-the-spot" preparations to demonstrate to consumers the baking quality of New York State potatoes. Approximately 2,000 baked potatoes, supplied by the industry, were served to persons attending the show. In addition, recipes and pamphlets showing additional ways to use potatoes were distributed. The display gave the department an opportunity to evaluate the promotion possibilities of this type of demonstration and also served to stimulate interest among the industry in promoting New York potatoes for baking.

In cooperation with the New York Certified Seed Potato Growers Cooperative, the department prepared a directory of certified seed potato growers in the State. To facilitate buyer inquiries for seed, the directory lists quantities, location, and varieties of seed potatoes available.

Eggs.--The Empire State Trademark program to develop new markets for New York State eggs was continued. Based on quality control with mandatory inspection, efficiency in handling, and product promotion, the program was increased within the past year from 3 packers shipping to 5 retail outlets to a total of 15 packers supplying 60 retailers. Through the price premiums afforded by the Trademark program and the increased labor efficiency brought about by the adoption of department recommendations, one producer-packer shipping approximately 100 cases under the trademark label at 2 cents per dozen premium reported a $5,000 increase in farm income based on premiums of more than $3,000, and savings in increased labor efficiency and decreased low quality of approximately $2,000.

Another phase of the Trademark program is that of training participating farm families and their employees to promote their own products through in-store demonstrations. One small chain store selling 76 cases of eggs per week before entering the program currently is handling 105 cases, including 55 cases of Trademark eggs at a 6-cent per dozen premium. This increase in sales is a result of improved quality and cooperative promotions conducted by the retailer, producer, and department personnel.

In cooperation with local extension personnel, poultry commodity groups, and related industry committees, two countywide quality control surveys were made to obtain pertinent data regarding quantity and quality of eggs available and adequacy of handling procedures used. The quality determination and information compiled regarding washing, handling, and sizing represented 30 to 50 percent of the farms in each county. Certificates summarizing the quality

gradings and recommended operational changes were forwarded to the producers and local cooperating agencies. Follow-up meetings were held to report overall status of the county and to help increase dissemination of information regarding proper handling and marketing practices. As a direct result of these surveys, industry leaders in the two counties reported general improvement in quality and handling methods.

During the year, department personnel, in cooperation with a carton manufacturer, completed plans for the design and specifications of a new standard egg carton bearing the Empire State Trademark. Based upon an informal consumer preference study conducted last year, the carton design has been enthusiastically accepted by producers, packers, and retailers engaged in the Trademark program. In cooperation with another carton manufacturer, the department is preparing an attractive two-color, pulp-type carton to aid the small producer-packer.

The department also continued its promotion program for high quality eggs through special exhibits at the State fair and other events throughout the State. More than 175,000 persons attended these demonstrations and approximately 105,000 pieces of literature on purchasing, preparation, and storing of eggs were distributed.

Apples.--The department sponsored apple merchandising exhibits at two meetings of the New York State Horticultural Society to inform the trade of new merchandising methods and practices that could be used to promote greater use and sales of apples and apple products. The exhibits emphasized (1) increased use through "natural" apple juices, (2) greater competitive potential through processed apple products, and (3) new merchandising methods to stimulate sales of fresh apples. The industry supplied the exhibit space, over 200 gallons of apple juice, and processed apples for both displays.

The weekly apple report of f.o.b. farm and country point storage data was continued, and additional information for controlled-atmosphere sales, including actual sales and a report on volume remaining in storage incorporated in the report.

Farm products.--Department specialists assisted the New York State Grange in a cooperative statewide project to promote New York farm products through grange sponsored "State Products Dinners." Information and display kits together with a history and importance of New York farm products and farm products menus were prepared and distributed to the 900 subordinate granges in the State.

In an effort to increase market outlets in foreign trade, the department cooperated with representatives of the New York Department of Commerce to inform producers and processors of potential export markets. Information was compiled on products available for export with special emphasis on potatoes, poultry, and processed foods.

Vegetables.--The onion market information report for major producing areas in the State was continued. This is the only statewide report available to growers, shippers, and buyers of onions and contains information on weather, demand, market movement, supply and price. Issued each Tuesday and Thursday,

the report included similar information on pascal celery and, for the first time, lettuce.

The market information report containing information on quantity, prices, packing, and cooling of sweet corn grown in the mid and lower Hudson Valley and Rochester areas was expanded to include information for eastern seaboard markets on prices, market conditions, supply and number of unloads.

The department also continued to issue the daily marketing summer crop information report and the weekly crop summary report providing information on weather conditions, supply, demand, quality, storage, and market quotations of a number of vegetables grown in New York State.

Livestock.--Monthly figures were obtained on the movement of more than one million animals passing through livestock auctions throughout the State. A quarterly report was issued showing volume of sales by grade, classes, and type of animals; and a weekly report was issued on 10 auctions located in eastern New York State.

Maple products.--The weekly report covering information on weather, supply, and marketing conditions for the State and major competing areas was again made available to New York maple syrup producers and buyers.

Christmas trees.--Information compiled from data received from more than 650 cooperators was released in a weekly report during the Christmas tree marketing season. The report provided information on prices by variety, quality factors, demand, supply, movement to market, and other aspects of marketing. The department cooperated with the New York State Christmas Tree Growers in making a survey of its membership to determine number of trees available for the 1960 season. Information was gathered on variety, on-the-stump or cut and bundled, age, size, U.S. grade, and so forth. Results of the survey were mailed to 2,500 potential buyers.

Improving marketing efficiency (NY-C-1)

Personnel of the department continued to assist marketing organizations in improving operational efficiency. As a direct result of working with one chain in a study of their concessionaire-operated produce system, the department was requested to help in a long-term project to determine the efficiency of a centralized produce packing operation and plan a plant location, select equipment, and make other necessary arrangements for an efficient produce handling operation for this chain store organization.

Department personnel continued to work on standardizing and developing more attractive and economical containers for fruits and vegetables. A box for cucumbers and a tray for strawberries were designed and recommended to the industry as more economically constructed containers for packaging. Work is currently underway to develop a suitable container for shipping mature tomatoes.

Providing new basic data (NY-D-1)

Fruit.--Studies in developing improved apple production forecasts were continued to develop relationships between size and numbers of immature fruit at various dates during the growing season and the size and number at harvest time. Data from earlier surveys were analyzed to determine size of sample necessary in estimating number of fruits and to establish relationships which will permit forecasting fruit growth and disappearance at harvest time. Post-harvest counts of unharvested fruit were made during the past season to measure fruit lost during harvest.

Forecasts of commercial apple production by areas were issued to (1) assist in the operation of the apple marketing order, and (2) aid in marketing the apple crop.

The fruit tree survey was prepared and distributed to all commercial growers and interested processors and industry representatives. This bulletin included numbers of trees for major fruits by varieties with breakdown by counties or production areas.

Summarized results of the grape processors' survey showing tonnage of grapes by production areas and varieties, prices, and primary utilization, were distributed to processors, cooperatives, and growers as a guide to current supplies and production trends.

Reports of survey results were also issued on: (1) Stocks of dry beans by varieties on farms and in commercial warehouses, (2) estimated planted acreage of Long Island potatoes, (3) vegetable acreage in muckland areas, (4) grain seeding rates and new seeding mixtures, (5) statistics on the dairy industry, and (6) a crop yield index for New York State.

NORTH CAROLINA

Improving marketing practices and expanding outlets (NC-B-2)

Fruits and vegetables.--The primary aim of activities under the fruit and vegetable phase of the project was to assist farmers in specific areas of North Carolina to develop satisfactory outlets for products grown on land released from cotton and tobacco on account of acreage allotment programs. Following a survey made by the North Carolina Department of Agriculture of farm family density, available funds and labor, and available facilities to handle new cash crops, farmers in a 3-county area of the State were assisted in initiating a marketing program which assured them returns per unit of product equivalent to that received by the large, mechanized farmer in other areas. One of the new cash crops recommended was processing-type cucumbers. Department representatives arranged for out-of-State pickle processors to contract for about 1,000 acres of cucumbers. Producers grossed approximately $93,000 from this acreage and gained a new source of income.

Assistance was also provided cooperative producer groups in selecting crops with the best market potential, in improving facilities and in increasing the

efficiency of grading, washing, and cooling operations. Among the new crops tried in these areas were asparagus, cabbage, cucumbers, onions, and tomatoes. In one instance activities of the department in helping to modernize a processing plant resulted in an increased production potential for the plant and a substantial improvement in income for local producers of sweetpotatoes, snap beans, and okra.

The fruit and vegetable bulletin listing products available, probable harvesting dates and locations was again prepared and sent to about 700 buyers in 20 States.

Tobacco.--With the cooperation of county agents, vocational teachers, and farm organizations, department specialists continued to inform tobacco farmers, through group meetings, of the current tobacco situation with emphasis on stocks on hand, domestic and export demand, and changes in consumer demand and other developments affecting the tobacco industry. This service helped farmers in determining the kinds of tobacco most likely to be in strongest demand during the marketing season and gave them a sounder basis for planning their operations.

The second phase of the project covered farm sorting and market preparation demonstrations with farm groups. In 48 group meetings, 1,425 farmers were shown how to apply simple methods of farm sorting to meet export and domestic demand, as well as U.S. Standard grades. Farmers attending these meetings brought tobacco from their individual crop and were assisted in applying the practices of sorting on samples of their own tobacco. Through these meetings and farm sorting demonstrations, farmers have learned more about the tolerances within standard grades and are sorting closer. For example, one farmer, applying sorting principles pointed out in the demonstration, raised his tobacco one quality grade, thereby increasing the value on different lots from $4 up to $15 per hundred pounds.

Monthly warehouse sales reports from 310 warehouses in the State were summarized and mailed to approximately 1,000 growers, warehousemen, and others. The annual North Carolina Tobacco Report was prepared and requests filled for 6,000 copies. In addition, a series of six articles was prepared on the production and marketing of tobacco in six foreign countries to familiarize farmers and others with the increasing competition in the world market for flue-cured tobacco.

Dairy.--Continuing the program to encourage increased consumption of milk, particularly at the youth level, the dairy marketing specialist conducted 198 meetings in public schools throughout the State. The lectures and demonstrations emphasized the importance of milk in the diet, and were attended by about 29,000 school children and 1,000 teachers. Promotional talks were also made before PTA meetings and at pre-school clinics. This program stimulated increased consumption of milk in 1959-60 amounting to nearly 5 percent in the School Lunch Program and 12 percent in the Special School Milk Program.

The dairy specialist cooperated with State agencies and industry organizations in staging numerous promotional events during June Dairy Month, and assisted in preparing information materials promoting use of milk and dairy products. Total consumption of fluid milk and cream for the State in 1959 increased 7.17 percent over the 1958 consumption.

Poultry and eggs.--Activities under this project, focused on the problem of increased poultry and egg production and declining prices, centered around: (1) Establishing additional market outlets, (2) increasing efficiency in poultry processing plants, and (3) promoting improved grading and handling practices among commercial egg producers and handlers.

During the year egg quality and grading schools were held, and direct assistance was given individual farmers in proper methods of handling, washing, candling, sizing, packaging, and farm storage.

Plans and promotional efforts of the department and interested groups culminated in the construction of a modern poultry plant in one of the heavy broiler producing areas in the State. Service work to increase efficiency in existing poultry processing plants consisted of preparing detailed floor plans and equipment layouts for 6 poultry processing plants, and 3 egg grading and packing plants, assisting 3 plants in making changes to improve product flow, and drawing detailed plans for additional floor space for a turkey processing plant. Further assistance was provided through visits to poultry plants and consulting with operators on improved operational procedures. These contacts resulted in numerous minor improvements being made.

Livestock.--The department continued to assist the expanding livestock industry in North Carolina by organizing and conducting livestock pool sales throughout the State. These pools included feeder calf and yearling sales through which a total of 14,771 animals were sold at prices averaging from $2 to $5 per hundredweight more than prices received for same grade and weight on local auction markets. Additional assistance in marketing cattle included planning and conducting special sales of stockers, fat cattle, and feeders.

A total of 26 lamb pools were conducted in which 11,355 lambs were sold. The department also cooperated with marketing personnel in Virginia to combine 9 individual wool pools in southwest Virginia with the 4-county pool in North Carolina. Separate bids were obtained on each of the pools but all were sold on the same day at the same price, resulting in producers receiving higher prices through the combined pool than they would have received through individual pools.

Some producers were again assisted in organizing special feeder pig sales. More than 4,000 quality pigs were moved through the 2-county feeder pig sale which is shipping pigs out-of-State on a regular basis. One of the outstanding results of the work under this project is the increased numbers of meat-type hogs being produced and marketed in the State.

Improving efficiency of cotton gins and cornmeal mills and providing other technical or engineering assistance (NC-C-1)

Work under this project covers technical or engineering services for various marketing firms in improving existing facilities or the development of new facilities, selecting equipment, and developing efficient handling methods. During the past year, areas of work included cotton gins, cornmeal mills, seed processing plants, vegetable processing plants, and slaughter houses.

In connection with cotton ginning, department specialists cooperated with the North Carolina Extension Service and the USDA Cotton Ginning Laboratory at Clemson, South Carolina, in conducting a series of gin operator and cotton picker-operator schools, attended by more than 300 cotton ginners and farmers interested in mechanical harvesting of cotton. Following the close of the ginning season, over 400 gins in the State were checked for inventory of equipment and the condition and repair of the equipment in preparation of the 1960 crop. The objective of this activity is to preserve and improve the spinning qualities of North Carolina cotton.

The emphasis of work with cornmeal millers was placed on continuing quality improvement and encouraging millers to use a milling grade corn. The specialist assigned to this work made 211 visits to corn mills to assist millers with operational problems, attended trade organization meetings, and supervised demonstrations of special corn product mixes at public gatherings.

Improving facilities and methods for handling grain and seed (NC-C-2)

Activities were continued under this project toward providing adequate grain storage facilities; encouraging merchandising grain on a grade and quality basis; and emphasizing the importance of storing, handling, treating, cleaning, and merchandising high quality seed.

Activities relating to grain included the following: (1) Assistance was provided 19 firms in planning new and expanding existing facilities, which resulted in 1,901,400 bushels of additional grain storage space; (2) personnel of grain elevators were trained in efficient operating techniques; (3) meetings were held with producers and dealers on merchandising practices and grading procedures; (4) surveys were made of 5 marketing areas to determine need for and feasibility of constructing new facilities; and (5) a report "Marketing Grain on Grade and Quality," was prepared and distributed to the grain industry.

While benefits of much of this work will be realized over a period of years, it is estimated that from the additional storage facilities alone, a saving of $1 3/4 million will result through elimination of transportation costs for shipping grain out of the State during harvest season and shipping it back later in the year and the reduction of deterioration and loss from insects, birds, and rodents.

Assistance provided the seed industry included conducting detailed surveys in 27 seed processing plants to determine need for remodeling facilities for more efficient operation, selecting proper equipment, and demonstrating operation of such equipment; and conducting meetings on trends and changes in seed handling and marketing conditions.

Results of these activities have been reflected in improved seed handling, cleaning, and treating facilities which have reduced operating costs.

Providing new basic data (NC-D-1)

Two commodity bulletins containing all available statistics at the State and county levels for tobacco and for cotton were published. These publications made readily available pertinent information for use by farmers, processors,

marketing officials, and government agencies in formulating marketing plans and in making economic studies. The assembly of historical data for each of the important agricultural commodities in the State was continued.

NORTH DAKOTA

Improving and maintaining quality of dairy products (ND-A-1)

In its program to maintain quality and improve marketing of dairy products, the North Dakota Department of Agriculture continued to work with various segments of the dairy industry on the proper care, processing, and handling of dairy products. The main approach to this objective was in testing samples of raw and pasteurized milk and cream picked up at farms, dairies, creameries, storage depots, dairy trucks, and retail stores. When results of these tests indicated that faulty equipment or handling methods were responsible for off-quality, the fieldman notified the operator of the findings and assisted in correcting the condition. For example, retail store samples of a large milk processor with outlets throughout the State were tested and found to have extremely high bacterial and coliform counts. After eliminating the possibility that the samples had not been collected or handled properly, a survey was made of the retail stores handling the processor's product. Improper handling and inadequate refrigeration were disclosed in numerous instances. The fieldman brought these inefficiencies to the attention of store managers, and sub-distributors were instructed in proper handling procedures. Although the situation improved somewhat, it was decided to check laboratory test records to compare date of pasteurization and date sample was collected. Results indicated that bacterial count generally began to climb after the fifth day and after the seventh day extremely high bacterial counts were found in most of the samples. The plant revised its coding system by stamping cartons 7 units greater than date of pasteurization. Fieldman, truck drivers, and store operators were then instructed by the milk plant that whenever the number on the carton corresponded to the date, the milk was not to be sold but returned to the dairy. After this system was inaugurated the percentage of high bacterial count milk found in the stores dropped from over 50 percent to less than 10 percent.

Selling milk for manufacturing purposes became widespread in North Dakota during the past year. Since many of the producers entering the milk manufacturing field were cream producers and had little experience in handling milk, they were assisted in establishing proper sanitation and cooling procedures. In addition to the established creameries turning to a manufacturing whole milk operation, several cheese factories have been built and others contemplated. To assist with the establishment of this new type operation in the State, department personnel met with several community, processor, and producer groups to explain the dairy quality program and to encourage quality in manufacturing milk production.

As a result of these activities the quality of North Dakota dairy products improved substantially at all levels during the year. In 1960, laboratory analysis showed 81.4 percent of retail store milk samples were Grade A compared to 74.0 percent in 1959, and 94.5 percent of the pasteurized milk samples picked up at dairies rated Grade A, compared to 88.8 percent in 1959. All other

products such as chocolate milk, skim milk, and cream showed an increase in quality over the previous year.

Demonstrating methods of preventing deterioration and contamination of grain in storage (ND-A-2)

The statewide grain sanitation program designed to eliminate contamination of cereal grain and maintain quality was continued. Major emphasis was again placed on improved sanitation and storage practices in on-farm storage facilities, since 80 percent of the grain in North Dakota is stored on farms. With the cooperation of local agencies, countywide farm demonstrations were held on the use of rodenticides, and the types of construction needed to eliminate rodent and bird contamination. Baiting programs were carried on throughout the county at the same time farm demonstrations were held.

In addition to the farm demonstration activities, personnel of the department prepared and displayed exhibits on grain sanitation methods at several county fairs and participated in several statewide radio and television programs on grain sanitation. An important expansion in the grain program last year was the integration of educational material on grain sanitation in vocational agriculture classes and 4-H Clubs.

In the 23 counties participating in the grain sanitation program, 154 farm demonstrations were held, and special technical assistance provided 355 elevators, townsites and dump grounds with the rodent baiting program.

The North Dakota grain sanitation program has contributed materially to the improvement in quality and the increased amount of saleable cereal grain in the State.

Improving methods and expanding market outlets for Red River Valley potatoes (ND-B-1)

In an effort to find solutions to problems affecting the distribution and acceptance of Red River Valley potatoes and thereby expand outlets for fresh use and processing potatoes, marketing representatives of the North Dakota department visited chain store buyers, brokers, wholesalers, jobbers, potato chippers, and prepeelers in major distribution cities in 18 States. The purpose of these visits was to get firsthand information on preferences of particular markets on size and quality, package preference and trends, relative price of Red River Valley potatoes and other potatoes in the market, and any special information on market conditions and transportation problems that would be of value to potato growers and shippers.

These contacts not only made it possible to learn what growers and shippers could do to improve distribution and increase acceptance of potatoes for the fresh market, but also provided an opportunity to inform the trade of industry activities to help move potatoes such as the dissemination of point-of-sale material, newspaper advertising, and other promotional media.

A report summarizing information gathered on visits to the States was sent to all growers and shippers at the end of the season. The report

contained such information as type of market visited, variety of potatoes available and source, size preferred, and so forth. This information provided growers and shippers with a better understanding of the size and quality differences that exist in various areas, and made them more aware of changes that have taken place in distribution of potatoes and the need for adjusting marketing practices to meet these changes. An example of this is the effort of growers to consolidate their storage to make a greater volume of potatoes available for plant washing, to gain larger volume of supply, and increase packaging opportunity.

The tremendous increase in the amount of potatoes used by the chip industry and the fact that sales of potatoes from Red River Valley to potato chippers had not kept pace with the national growth, prompted the initiation of the program to expand sales of chipping potatoes. In cooperation with the Red River Valley Growers Association, meetings were held with growers to urge proper storage-management practices to retain chip quality inherent in Valley potatoes, and with potato chippers to acquaint them with the natural high quality and value of Valley potatoes for chips. Representatives of the department also contacted individual chippers to discuss the chipping potato program and prepared and disseminated brochures pointing out the value of chipping potatoes to growers and chippers. As a result of these activities the shipments of potatoes for chipping have increased from 3,768 - 400 hundredweight-carlot equivalents in 1958-59, to 6,500 carlot equivalents in 1959-60. The increased demand and distribution of Valley chip potatoes has resulted in the construction of 2.5 million bushels of potato storage specifically designed for potatoes for chipping.

OHIO

Providing new basic data (OHIO-D-2)

Quarterly pig report.--Quarterly surveys on the Ohio pig crop and hog inventories were prepared and reports issued to hog producers and other interested persons. These surveys are a part of a coordinated 10-State program, and the composite of these reports provides information on the total supply that will be available for market during each quarter, as well as by months within each quarter, and enables growers to adjust their hog marketings to market demand.

Fruit tree survey.--The survey of fruit trees and grapevines in commercial orchards was completed and the results tabulated and summarized for publication. This report contains information on number of apple, peach, sour cherry, and grapevines by age groups and varieties. Results of the survey indicate a shift to new varieties which will necessitate changes in marketing procedures to handle earlier varieties.

Fruit growers directory.--The increasing difficulty of buyers in locating Ohio fruit growers because of shifts in production areas and increasing activity of truck and roadside marketing resulted in many requests for a fruit growers' directory. During the past year, the Fruit Growers' Directory listing the name, address, and location of producers of apples, peaches, plums, cherries,

and grapes by counties was compiled and sent to all county agricultural agents, producers, wholesalers, and truckers, and other interested persons in Ohio and other States.

Timber price report.--In cooperation with other State agencies, the Ohio Department of Agriculture initiated a survey of sawmills and other buyers of timber to obtain prices paid for timber products. The report issued on the survey is designed to aid in the marketing of timber by providing growers and buyers with information on the current prices for forest products marketed in Ohio. Prices were collected for all grades and species, and products covered in the survey included sawlogs, veneer, stumpage, pulpwood, charcoal wood, and ferro-alloy wood. Results of the survey were sent to growers, sawmill operators, magazines and newspapers, and other persons interested in timber marketing.

OKLAHOMA

Improving and maintaining quality of agricultural products (OKLA-A-1)

Eggs.--The Oklahoma State Board of Agriculture continued to assist egg producers, packers, wholesalers, and retailers in proper methods of candling, grading, sizing, storing, and marketing eggs. As a result of this egg quality control program, Oklahoma consumers now have dependable local sources of high quality eggs.

Dairy products.--The program to maintain quality of milk and cream produced in Oklahoma was continued through assistance to producers, buyers, handlers, and processors on problems affecting quality. During the year, department personnel conducted milk and cream grading clinics throughout the State for producers, buyers, and buttermakers. Visits were made to cream buying stations and milk plants, and producers of milk not qualifying for top price were assisted in proper quality maintenance and handling methods.

It is estimated that assistance provided by the department under this program resulted in a 2-cent per pound increase in returns to producers on about 10,000,000 pounds of butter.

Expanding outlets for farm products (OKLA-B-1)

The main activity conducted under this project, which was discontinued before the end of the reporting period, was the preparation of a release showing names and location of hay producers, amounts of surplus hay on hand, and when available. As a result of this listing, all surplus hay was moved at a satisfactory price.

OREGON

Maintaining quality of stored filberts (ORE-A-1)

Because of the great fluctuations in annual filbert production--surplus crops one year followed by relatively short crops the next--work was continued

to develop storage practices necessary to maintain quality of stored filberts during surplus periods to assure top quality nuts during years of low production.

Findings to date have demonstrated that in-shell filberts stored in common storage at about 8 percent moisture in polyethylene-lined burlap or paper bags will retain quality for at least one year. Under normal common storage in unlined burlap bags, considerable fresh flavor was lost and rancidity developed during one-year storage.

During the past year, additional storage tests were conducted by two commercial nut firms in Oregon with filberts in standard size poly-lined burlap and paper bags, and check lots in unlined burlap bags. Samples were tested monthly for moisture determinations, free fatty acids, and peroxides as an index of quality. Special drying and weight measurements were also being made on the bags to test their efficiency as barriers to moisture vapor exchange.

Improving quality and marketing practices for potatoes (ORE-A-2)

Based on previous tests which disclosed the correlation of specific gravity and cooking quality of potatoes, activities were directed toward market potential and consumer response to specific gravity-graded potatoes.

In one test, two stores handled potatoes packed in 5-pound polyethylene sacks labeled "bakers" or "boilers" depending on their specific gravity and intended use. The sacked potatoes were displayed with appropriate signs and sold in competition with other potatoes in the store. Two methods of evaluating market response were used: (1) Pounds of potatoes sold, and (2) consumer replies to an enclosed questionnaire. Store records showed that specific gravity-graded potatoes were sold in much larger quantity than all other potatoes each day when they were available, and consumer response was very favorable both as to grading potatoes for special cooking purposes and their intentions to buy again.

In addition to the store study, two restaurants tested high specific gravity potatoes for french frying, baking, and mashing, reported a preference for such potatoes for french frying and mashing. For baking, size was considered more important than internal texture.

Under the direction of the project leader a specific gravity potato separator was constructed 2/ for pilot commercial tests on Russett Burbank potatoes in central Oregon.

Preserving seed quality through improved handling and packaging (ORE-A-3)

The three major problems to be solved through work under this project are: (1) To determine viability of important forage seeds in present common packages and under commercial storage conditions in western Oregon, (2) evaluate

2/ Based on specifications similar to those outlined in Michigan Agricultural Experiment Station Bulletin Vol. 38, No. 1, Aug. 1955.

efficiency of various packaging materials for preserving seed longevity under different storage conditions, and (3) determine which seed packaging material is most suitable for storage in western Oregon and for shipments abroad.

In conjunction with these objectives, samples from 50 seed lots in 17 warehouses were tested at 3-month intervals to determine seed viability and moisture content. Results indicated that seeds of Alta fescue, Chewings fescue, and Sudangrass should not be stored in burlap bags for longer than 2 years; mature seed of Crimson clover, Highland bentgrass, and common ryegrass could be stored under present conditions for longer than four years, and forage seed should be dried prior to shipping during rainy winter months. Upon being informed of these findings, the seed industry in Oregon took necessary precautions in storing seed lots and financial loss and law suits from seed deterioration during shipping and storage were greatly reduced.

Two kinds of forage and seed were packaged in various thicknesses of polyethylene bags and bags of other material and were stored under simulated tropical and temperate conditions, as well as warehouse conditions. In the storage tests using various thicknesses of polyethylene, it was found packaging seed in heavy polyethylene bags delayed seed deterioration but not for long periods of storage under tropical conditions, where Chewings fescue lasted for three months and Crimson clover one year.

Artificially dried Chewings fescue seed was packaged in 9 different kinds of commercial packaging materials and stored in two commercial warehouses in western Oregon and two sets of packages were shipped overseas via ordinary commercial routes by a seed company. Results showed that seed moisture content was greatly affected by the packaging material and method, while seed viability had changed after 9 months' storage. Seed in paper bags contained highest moisture, followed by burlap, paper with asphalt, and paper with thin polyethylene.

The packaging materials and storage methods were recommended to the seed industry and are being put into use.

Development of methodology for certification of virus-free nursery stock (ORE-A-4)

The work to develop methods and procedures for certification of virus-free nursery stock was continued. For stonefruit, this is being accomplished by establishing one isolated foundation plot where virus-free buds that are regularly checked for virus each year are made available to nurserymen wishing to establish a source of virus-free buds. The nurseryman's budwood plot is then reindexed for virus which may have come from infected rootstock, pollen from infected trees, virus spread by insects, and so forth. The foundation plot now is planted with 42 trees of 12 varieties of sweet cherry, 3 varieties of sour cherry, 20 varieties of plums, 3 varieties of pear, and 4 varieties of apples. At present there are 313 Mozzard seed trees, 390 F12-1 Mozzard clonal live trees for vegetative propogation, and 669 Mahaleb seed trees in Oregon used as a source of rootstock material.

Fourteen of the 24 nurserymen propagating several thousand cherry trees annually have established scion orchards for their own budwood needs and also sell budwood to other nurserymen.

During the past year, a total of 1,911 trees have been indexed for virus, and those found to be infected have been removed.

Nurserymen have found that orchardists are demanding virus-free nursery stock and have learned that by using virus-free budwood they can increase their stand of buds as much as 50 percent, and that the improved grade offers a better potential market and greater returns. Orchardists using virus-free stock are realizing more vigorous trees, earlier fruiting, and improved quality. The records of one Oregon orchardist indicate the virus-free sour cherries produced as much fruit when 4 years old as former virus infested trees produced when 7 years old.

Assisting marketing agencies in reducing costs and improving efficiency (ORE-C-1)

This project was initiated to determine the best procedures for securing adoption of research results by processing plants and other marketing agencies in Oregon. The initial phase of the project involved a survey, through personal interviews and questionnaires, to determine motivational forces in food processing companies of ideas which result in new or improved products and technological improvements. Companies covered by the survey process fruits, nuts, vegetables, milk, seafood and meats in western Oregon, and employ over 13,000 persons, ranging from 1 to 1,500 per plant.

Data obtained through the survey were being tabulated and summarized and a publication will be issued in the near future.

Objective sampling of filbert nuts (ORE-D-1)

Work was continued under this program to develop objective procedures of sampling to improve accuracy of production estimates of the filbert crop and in establishing indexes for prediction of size and quality prior to harvest. Following a July survey of nut counts in the field, determinations were made of weight and percent of defects, and the data used to forecast 1960 filbert production. The forecast, adjusted for weight and defects, was used by the Filbert Control Board in setting marketing restrictions for the 1960 crop.

During the year a new phase of the project was started with blossom counts being made on 1/10 portion of 395 trees in 198 randomly selected orchards. The first forecast using the blossom count method will be made next year.

Providing marketing information (ORE-D-2)

Two releases reporting on the progress of activities under this project were prepared and made available to the wheat and grain trade during the year. The first report covered truck inshipments of wheat into the Pacific Northwest area (showing receipts only at Oregon points) and the second report contained information on the extent that Northwest produced wheat is used in the production of flour in the area and the destination of flour shipments. These reports

are part of the broad objectives of the project to determine sources and methods of obtaining and reporting truck movement of farm products in the Pacific Northwest and to obtain data on destination of domestic flour manufactured in the Pacific Northwest and classes of wheat used in milling flour.

PENNSYLVANIA

Expanding outlets for farm products (PA-B-1)

During the reporting year, major activities under this project were directed toward helping to coordinate merchandising programs and promotional efforts of various commodity groups and agricultural organizations in Pennsylvania. For example, representatives of the Pennsylvania Department of Agriculture developed a promotion program for the Philadelphia Fresh Foods Council organized to promote the Philadelphia Food Distribution Center, and assisted in planning and conducting such regular promotions as March Egg Month and Pennsylvania Peachtime.

The department issued a monthly publication on the current and forthcoming promotional programs of the different commodity groups which provided the principal means for coordination. A calendar of forthcoming events, which was a regular feature of the bulletin, encouraged tie-in promotions and other cooperative activities. The promotional bulletin is distributed to about 5,000 interested persons throughout the State.

In addition to arranging television coverage and guest appearances for promotional events, representatives of the department participated in 3 television shows with programs which publicized the Philadelphia Food Distribution Center, promoted gift packages of Pennsylvania agricultural products, and demonstrated the care and preparation of eggs in the home. Numerous exhibits promoting various agricultural products were prepared and displayed at farm shows, State fairs, and other agricultural events throughout the State.

Improvements in market organization and facilities (PA-C-1)

Activities were continued to provide producers, marketing firms, community leaders, and terminal market operators with information to assist them in preparing products for market, improving handling and operating methods, and in planning new marketing facilities to better meet the needs of buyers and sellers. Specific attention was given in acquainting potential buyers, business firms, and the general public with the advantages of a well-planned terminal market facility through publicity and tours of the Philadelphia Food Center.

During the year the department, in cooperation with the Extension Service, conducted a survey of Pittsburgh wholesale fishery products and cut flower facilities. The results of the two surveys were published and will be included in the report of the overall survey of wholesale food facilities of Pittsburgh being conducted by the U.S. Department of Agriculture. Preliminary plans were also developed for conducting a general survey of wholesale food facilities in the Scranton-Wilkes Barre area.

As part of the continuing program in connection with the Food Center, a study was prepared, at the request of the wholesale fruit and vegetable group, in improving market operations and specifically to help establish selling hours, operating practices, and promotional activities. The report has been used repeatedly by the board of directors of the Food Center and provided the groundwork for the public relations activities of the Philadelphia Fresh Foods Council.

Supplementing the direct assistance provided wholesale operators in improving handling methods and encouraging the use of improved handling equipment, the specialist assigned to this project prepared an article on consequences of producers using open, damaged, or dirty containers for products shipped to terminal markets. The article was very favorably accepted by the trade and appeared in numerous trade journals and in more than 60 publications.

Providing basic data and marketing information (PA-D-1)

During the past year the survey on milk production and marketing practices was expanded to include all 67 counties. Data obtained from commercial dairymen through mailed questionnaires were published on a quarterly basis and provided the Pennsylvania dairy industry with information relating to seasonal patterns in milk production, utilization, disposition, demand, and prices. This information is needed in developing an effective milk marketing program in Pennsylvania and in establishing equitable producer and consumer prices for milk.

Christmas trees.--With the completed inventory of tree population by varieties and age groups serving as a base, annual surveys were conducted in January and May to provide current inventory data. In addition, surveys made during the harvest season--October, November, and December--provided the Christmas tree industry with data on volume of cuttings and prevailing prices, helped prevent price cutting, and stabilized market price.

SOUTH CAROLINA

Improving marketing facilities for agricultural products (SC-C-1)

The changes in tobacco and cotton acreage allotments accompanied by drastic changes in production methods and technologies focused attention on the need for a program to find new sources of income for South Carolina farmers affected by these changes. This project was developed to accomplish this objective through discovering market outlets, developing market facilities, improving marketing organizations, and in some cases, guiding the establishment of appropriate processing facilities.

Although background information, including production trend data by counties for many agricultural items, was available, data were lacking on certain of the newer crops and crops in which there had been a revival of interest such as grapes, pecans, soybeans, and sweetpotatoes. In addition, information was needed on the overall marketing needs and potentials of particular areas for supporting marketing facilities of a specific type and size. Based on these objectives, this project was initiated during the year and activities centered on the following commodities:

Grapes.--The limited markets for South Carolina fresh grapes during recent years created an urgent need for developing new market outlets. Interest in establishing a processing plant in South Carolina had been indicated by a northeast company if volume production could be assured and growers arranged for the construction and financing. The South Carolina Agricultural Marketing Commission made a survey in which production possibilities were verified, intentions to set new vines evaluated, organizational and financial problems successfully resolved and a site recommended for the facility. The plant was built and successfully operated, on a limited basis, during the 1960 season.

To further assist in the development of the grape enterprise, special arrangements were made with the Crop Reporting Service for a complete grapevine production survey which shows data, by counties, on number of vines by age and variety production, methods of sale, and planting intentions.

Pecans.--Another crop which has potential in the changing agricultural economy of South Carolina is pecans. Although a few shelling plants have operated with varying success over a period of years, none has had the volume of business which permitted maximum returns to the plant or to the growers. Local private and public interest in developing a pecan industry, together with greatly increased production, instigated the request for the Marketing Commission to conduct a comprehensive survey to determine the economic feasibility of an expanded pecan industry. Information obtained from the survey were being assembled for publication, and preliminary findings indicate potentials for the pecan industry greater than previous expectations.

Soybeans.--The expanded production of soybeans in South Carolina has brought about a need for more careful planning to balance the supply and demand. As a result of a survey of production by local areas, a local feed manufacturer expanded his operations which provided an increased market for soybeans.

Sweetpotatoes.--Preliminary results of a survey to determine whether South Carolina could support a sweetpotato processing industry indicate that data collected do not support previous assertions that such an industry would prove highly successful. The final report on the findings will be the means of preventing an unwise and wasteful expenditure of public funds amounting to many thousands of dollars.

Providing basic data and other marketing information (SC-D-1)

To assist producers, processors, and handlers in making intelligent decisions for orderly and systematic development of supplies, facilities, and outlets, the Crop Reporting Service continued to provide up-to-date market information on South Carolina agricultural products. This information was made available through the preparation and publication of special releases, such as the quarterly dairy report, calf crop, grain storage facilities, farm numbers, Lespedeza seed crop forecasts, pecan report, livestock slaughter, winter wheat and rye report; and the monthly bulletin on various crop, livestock, poultry, and related data. In addition, a number of new surveys were completed and reports published during the year. These included grapevine production, pecans, beef cattle numbers, cash receipts from farm income, and broiler production.

Providing basic data (SD-D-1)

The South Dakota Crop and Livestock Reporting Service continued its program of providing new and timely basic data through bulletins published for 10 counties.

The quarterly pig crop estimates were prepared and released as a part of the consolidated 10-State report. These reports help producers, processors, and others in making marketing decisions.

County estimates were also prepared and released for chickens raised, milk production, egg production, income from farm marketings, average value per acre of farm land and buildings, and calf crop estimates.

TENNESSEE

Improving marketing methods and expanding outlets for poultry and eggs (TENN-A-1)

Activities were continued under this project to improve egg grading and handling, and to assist poultry processors in developing efficient plant layouts. Personnel of the Tennessee Department of Agriculture held egg marketing schools for producers and packers on proper methods of grading, packing, storing, and handling eggs on farms and at assembly points. Follow-up visits were made to producers' farms to assist with the individual problems, and considerable time was devoted to working with the growing number of producers packing for direct sale to retail stores. Extension food information specialists, home economics teachers, and home demonstration agents cooperated in disseminating informational material on egg size and quality to consumers. As a result of these activities, producers are receiving premiums of from 2 to 4 cents per dozen for their eggs, packers are realizing savings through the elimination of loss of low quality eggs, and consumers are able to buy eggs of higher quality at approximately the same price as was once paid for ungraded eggs.

In the work with poultry processing plants, department personnel continued to visit such plants to determine what, if any, improvements were needed in facilities, equipment, and operating methods. Direct assistance was given operators in making needed improvements. In cases where new facilities or major construction repairs were recommended, the department enlisted the aid of the Transportation and Facilities Research Division of the Agricultural Marketing Service, USDA, in preparing plant layouts.

Improving livestock marketing methods (TENN-B-1)

Service personnel worked closely with feeder calf producers in developing plans for new marketing organizations, and continued to give assistance to established organizations. These associations were assisted in summer field inspection of calves; planning for sales; grading according to breed, quality, size, and weight; securing buyers; and furnishing such other assistance as needed. A total of 20,191 calves were sold through 19 organized feeder calf sales held during the year. Based on premiums of 2 cents per pound, it is

estimated that farmers received about $182,000 more for their calves than they would have through regular marketing channels.

Assistance was also provided in organizing and supervising feeder pig sales through which 16,582 pigs were marketed at an average premium of $2 per pig, or an increased return of about $33,000 to producers.

In connection with the lamb pools, department personnel assisted by demonstrating official grades to insure consistent grades from day to day and from pool to pool. This grading assistance was also extended to wool pools to encourage use of official grades in selling wool. In the 25 lamb pools, where 17,109 lambs were sold, it is estimated that lamb producers received premiums of $1 per lamb. In addition, by holding the sales in areas where no market existed and close to the source of production, producers saved approximately $30,000 in reduced transportation costs. In the 15 wool pool sales, 508,800 pounds of wool were sold at an estimated increase to farmers of $22,336.

In cooperation with Extension personnel, additional activities under this project included staging livestock shows, holding lamb grading classes, and judging livestock at many county fairs across the State.

TEXAS

Improving quality of farm products (TEX-A-1)

Eggs.--In cooperation with the Extension Service and the Texas Egg Council, the Texas Department of Agriculture continued its work with producers, dealers, retailers, and consumers on egg merchandising, quality improvement and maintenance, and grading. Activities included conducting special egg grading and handling schools, and preparing and distributing feature stories and informational material on egg quality. As a result of this program, there was a significant increase in the number of eggs being sold on a graded basis.

Dairy and poultry products.--The Texas department, in cooperation with the various dairy and poultry products organizations, prepared and released feature articles to Texas newspapers on promoting and maintaining quality of poultry and dairy products. Special exhibits were prepared for State and local fairs demonstrating various menu uses for these commodities.

Expanding outlets for farm products (TEX-B-1)

Seed.--Activities under this phase of the project were aimed at encouraging use of registered and certified seed. Meetings and demonstrations held for farmers and trade groups stressed the advantages of using high quality seed. The department prepared and distributed over 5,000 copies of a list of registered and certified seed growers, including type of seed, quantity, and name and address of the growers. A bulletin, "Seed Testing for Greater Profits," outlining the value of seed testing and the procedure for official seed testing also was widely distributed.

This program made it possible for farmers to locate and buy high quality planting seed which would assure them favorable returns on investment.

Sweetpotatoes.--Department personnel continued to work with producers, dealers, and retailers demonstrating proper handling, curing, storage and grading of sweetpotatoes. The improvements in storage and handling practices resulting from activities under this project will be the foundation of a proposed program to expand outlets for Texas sweetpotatoes.

Watermelons.--In cooperation with the Texas Crop and Livestock Reporting Service, the department again prepared and distributed informational bulletins for the East Texas and Southern Texas watermelon producing areas. Over 2,000 copies of the brochures, containing information on estimated production, varieties, truck and rail facilities, and names and addresses of producers and shippers, were distributed in each area to truckers, buyers, and shippers.

VERMONT

Improving milk flavor (VT-A-1)

Work was continued under the Milk Flavor Program to improve the flavor of Vermont fluid milk and increase milk sales by assisting producers and distributors in eliminating causes of off-flavor on farms and in marketing channels. Milk handlers and distributors were furnished information on milk flavor problems through published news articles and in meetings. The specialist assigned to this project also instructed students of vocational agricultural classes in milk flavor problems and in milk flavor judging, and assisted in milk judging contests at Vermont farm shows. The department worked steadily with the entire dairy industry in an effort to make milk flavor control a regular and continued part of all milk quality tests and inspections.

A few of the accomplishments resulting from the program are summarized as follows:

1. Feed flavors have decreased until they are not an important problem;
2. Stable ventilation has been improved through installation of good ventilating systems;
3. Much of the metal, damaging to milk flavor, has been replaced with stainless steel;
4. Flavor of samples of milk shipments to major handlers in Boston continued to show improvement;
5. A considerable part of milk retailed in Vermont is bottled in amber glass which protects it from light damage;
6. Retail sales of fluid milk in Vermont increased over 11 percent since the beginning of the program during which period there was just a slight gain in population.

Expanding market outlets for agricultural products (VT-B-1)

The main objectives of this project, initiated late in the reporting year, are improving quality and handling practices and expanding outlets for maple products. Some of the activities carried on by personnel of the department

included preparing exhibits of maple products for State fairs and the Eastern State Exposition and distributing informational literature to interested consumers, assisting the Vermont Maple Industry Council in an advisory capacity with the filming of a short movie covering the maple industry, meeting with representatives of the maple industry regarding maple grades, and finding an out-of-State outlet for Vermont maple syrup.

VIRGINIA

Improving and maintaining quality (VA-A-2)

Livestock.--During the year, the marketing agent assigned to this project assisted farmers in two locations in organizing and planning special sales for grain-fed slaughter cattle. Prior to establishing the special sales, marketing agents held demonstrations on the use of official live grades for livestock. On special sales days, cattle were assembled at an auction market, graded by State graders, and auctioned in uniform size and grade groups. These sales provided farmers in eastern Virginia with an alternate market for finished cattle at prices averaging approximately $10 more per head than those sold on other markets.

Canned tomatoes.--Tomato canners who were helped by Virginia department personnel in organizing a central sales agency, were assisted in improving marketing practices and in establishing quality specifications used for a quality brand label to meet buyers' satisfaction. Five thousand cases of tomatoes were packed under this label last year. Test stores were selected in 5 locations over the State to determine consumer acceptance of these tomatoes. As a result of these initial sales tests, the label was revised to increase consumer appeal, and repeat sales were being reported. All sales have been at a 5-cent per dozen premium over the quoted standard market for canned tomatoes.

Eggs.--Demonstrations of proper methods of assembling, grading, and cartoning eggs so as to preserve quality were given to egg producers and marketing firms. Marketing firms also were helped in organizing and implementing plant quality control programs and in developing plant efficiency through use of materials-handling equipment.

Grain.--During the year, department personnel demonstrated the use and value of official grades to grain dealers and producers in a 5-county area in eastern Virginia to encourage the adoption of this system of marketing grain. Special attention was given in this program to the problem of wet corn. Widespread adoption of the picker-sheller has reduced the harvesting period from about 100 days to 45 days and has resulted in a high moisture condition in much of the corn sold by producers. Since only 3 of the 10 grain handling facilities in the area operated grain drying equipment in 1959, it was estimated that 1,500,000 bushels of wet corn moving to market had to be processed before it could be utilized. This situation created a "sour" corn problem, lowered market prices to producers, and limited sales to terminal buyers. Some results of the detailed study of marketing practices of corn and other small grain in the 5-county area are reported under VA-C-4.

Improving marketing practices and expanding outlets (VA-B-3)

Feeder pigs.--Specialists of the Virginia Department of Agriculture continued to provide assistance in organizing and conducting special feeder pig sales. All pigs offered for sale were graded by State graders and sold in uniform quality and weight groupings. Since the program was initiated, sales outlets for Virginia pigs have expanded 45 percent through purchases by buyers in a number of neighboring States. During 1960, 11,385 pigs were sold through 19 special feeder pig sales at about $5 more per head than pigs sold through the usual outlets, thus increasing the income of Virginia pig producers by about $57,000.

Fruit.--During the year, a representative of the department, in cooperation with the Virginia Apple Commission, worked with all segments of the fruit industry in an effort to help growers sell more and better quality apples. The agent participated in a program to expedite mass merchandising and expand sales of Virginia apples in predetermined market sales territories. Wholesalers and retailers were contacted prior to harvest to determine market demand by varieties, containers, grades, and sources of supply. As a result of these activities, retailers reported substantial increases in tonnage of apples moved during 1959. During the special apple promotion campaign in 1959, one fruit grower reported his sales increased 38 percent over the same period in 1958.

Sweetpotatoes.--Activities to expand market outlets for Virginia sweetpotatoes were continued. During the year, the Farmer Cooperative Service of the U.S. Department of Agriculture was requested to make a survey of the Eastern Shore sweetpotato industry to evaluate the present competitive position and to establish future marketing goals and objectives. In cooperation with the retail trade, the marketing agent assisted in planning and participating in promotion campaigns to expand out-of-State markets for the Nemagold variety of sweetpotato. Personnel of the department assisted in these promotional efforts by contacting buyers in 10 large markets and explaining the quality program, building effective sales displays for retailers and assisting in distributing point-of-sale material. Several of these markets have made repeat orders and it was reported that some of the chain groups in these cities are shifting from the Puerto Rico-type sweetpotato to the Virginia golden sweetpotato.

Improving market facilities, equipment, and methods (VA-C-4)

Vegetables.--Marketing agents continued to assist the Vegetable Marketing Association and its members in improving marketing methods through better grading and the use of containers meeting buyers' requirements. The association was organized to help vegetable farmers located in a 5-county area surrounding Richmond to assemble, grade, package, and sell patrons' products. The success of this marketing program is evidenced by the fact that yearly sales volume has increased from $15,000 during its first year in operation to $151,000 in 1959, with 65 percent of the volume moving to buyers in 6 States.

Eggs.--Work was continued during the year with egg marketing firms in improving operational efficiency. Special emphasis was placed on studies to determine total cost, measure labor and machine efficiency, and in assisting

firms to reduce idle time and increase production time. Results of these activities helped to reduce costs in individual plants, and after several plant studies, one firm built a new $1/2 million egg packing plant that is the largest and most modern plant in the East.

Wool.--In 1960, county and local wool pools in two areas of the State were consolidated into area wool marketing associations through which wool was sold on the same date and at one location. The Virginia-North Carolina Mountain Wool Marketing Association, organized in cooperation with the Extension Service, representing 11 pools in southwest Virginia and western North Carolina, sold an estimated 533,700 pounds of wool; and the Northern Virginia Wool Producers Association, representing 6 Virginia and West Virginia pools sold an estimated 100,000 pounds of wool. Local pools were furnished a buyers' list, and information on prices, grades, sales volume, and selling dates. These activities have resulted in more buyer competition for Virginia wool and have materially reduced the price difference between local pools. Virginia farmers selling wool through the new method of volume selling received premiums of 5 cents a pound for their wool.

Grain.--Recent changes in mechanical harvesting, such as expanded use of the picker-sheller, have resulted in the harvesting of corn when the moisture is exceedingly high. Many grain dealers lack drying facilities to process wet corn and farmers are without adequate storage facilities on the farm to withhold corn off the market at harvest. A study of the 5-county grain producing area in eastern Virginia was made during the year to define the basic marketing problems farmers were facing and to make specific recommendations on what type of market action program should be developed to correct the situation. The study revealed that there was a 1,500,000-bushel supply of wet corn moving to market which had to be processed before it could be utilized in the market; grain drying equipment was needed at existing facilities; there was a need for more uniform methods in procedures used in receiving, weighing, and handling grain; and there also was a need for a uniform receipt system between grain handlers to help clarify to producers all the different types of discounts affecting marketing quality of grain. Since the study was made, three grain dryers have been added to the commercial grain facilities in the area. A steering committee, composed of Extension specialists, representatives from the State ASC Committee, and representatives from the State department of agriculture, was established at the State Agricultural College to devise a program to expand further the use of farm storage and grain drying facilities in the eastern corn producing area of the State. This program now has become the primary project of the State Electrification Council with all agricultural agencies working together under its leadership.

Providing special marketing information (VA-D-2)

At the request of the Virginia Dairymen's Association, the department, in cooperation with the Agricultural Experiment Station, continued its study of the Grade A milk industry. Two of the three planned surveys were completed and results published: "Looking Into the Grade A Dairy Industry in Virginia," and "Looking Into the Fluid Milk and Ice Cream Industry in Virginia." The latter report was completed during the year and gives a complete story on the procurement, processing, distribution, and investment cost for bottled

milk and ice cream; as well as data on 5-year trends in sales outlets, products sold, and containers used for fluid milk products.

These surveys have illuminated many problems and marketing opportunities in the Virginia dairy industry. For example, of the 23 cooperatives covered in the survey, 3 represent 40 percent of the dairy farmers selling Grade A milk in Virginia. At the request of 6 cooperatives, the marketing agent assisted them with merger plans. Two of these merged into one cooperative, and although the merger affected about 40 farmers, it resulted in the group receiving about $2,000 more for their milk.

WASHINGTON

Improving marketing methods and expanding outlets (WASH-B-1)

Vegetables.--In an effort to assist Washington squash growers to expand present markets and develop new ones, department representatives met with growers, buyers, and retailers to determine marketing problems at each level. The information obtained through these meetings was analyzed and published in bulletin form. Results indicated a need to improve methods of storing and preparing squash for market and to create a greater consumer demand through more precut and wrapped squash displays at retail outlets.

During the year the department collected and published basic information on asparagus which provided the Washington Asparagus Growers Association with information on supplies and prices. This information was used in bargaining with processors in establishing prices. By having this supporting material available in defense of their asking price, growers were able to obtain 1/4 cent more per pound than prices paid by California processors last season. On approximately 8,250 tons of processing asparagus, the 1/4 cent per pound additional price was worth about $41,250 to Washington growers.

Poultry.--At the request of the broiler and fryer industry, the Washington department, in cooperation with the University of Washington, conducted a consumer survey to determine the impact of their "Grown in Washington" promotion in creating a preference for Washington-grown birds. Information was obtained also on consumer reaction to product freshness, private brands, and present methods of merchandising. The results of the study were summarized and published and were being reviewed with processors and chain store buyers.

Livestock.--To assist the Washington cattlemen to adjust their production and marketing programs to the competitive markets of Canada, Australia, and New Zealand, the department surveyed Canadian cattle producing areas to determine future marketing volumes and timings of marketings. These estimates were summarized and published, together with information on Australia and New Zealand meat imports and such factors as exchange rates, import quotas and tariffs.

Hay.--The survey of the hay marketing situation was completed during the year. Data obtained from dairymen, alfalfa hay producers, dealers, and processors were published and results made available to dairymen and hay producers. Information in this bulletin will be used as a basis of discussion with hay

producers and dairymen concerning alternative methods available to them for reducing marketing costs, and will enable them to have a better understanding of the present market structure, and how actions of buyers, sellers, and marketeers affect price stability of hay.

General.--The preparation and publication of a weekly report on marketing information was continued. Nearly 2,000 copies of this report, containing current data on crop and livestock prices and volume, were distributed to producers, cattlemen, and other persons interested in agricultural marketing.

Providing basic information (WASH-D-1)

The series of county data bulletins was completed for all 39 counties in the State. Copies of the bulletins were distributed to farmers, banks, county agents, farm equipment dealers, and numerous other persons engaged in agricultural marketing. Many industries seeking new locations within the State of Washington have used these bulletins.

At the request of the Puyallup Valley Berry Growers Association, the Washington Department of Agriculture conducted a survey of berry processors not under contract with the Association to determine State average price paid for red raspberries. Information on prices, together with tonnage, was compiled into a State weighted average price and the figure supplied to the Association. Under the Association contract with processors, the final settlement of a crop is dependent upon difference between agreed upon base price and State average price. This information enabled the Association to get an additional 1/2 cent per pound for their 1959 crop. With 1,600 tons of berries marketed through this organization, the additional payment totaled $16,000.

WEST VIRGINIA

Expanding market outlets for agricultural products (WVA-B-1)

Timber.--The forest products marketing program developed to provide farmers, landowners, and sawmill operators with current timber marketing information was adopted during the past year.

Personnel of the West Virginia Department of Agriculture with the cooperation of other State agencies, collected and compiled information on forest products prices as a basis for preparing the first price report. The initial quarterly report on stumpage and f.o.b. prices at the mill, including volume and a range of prices for various species, was distributed to farmers, landowners, sawmill operators, bankers, and others interested in the forest industry.

Since the first publication of the West Virginia Forest Products News in March 1960, the bulletin was released bi-monthly to all interested persons. This report contains marketing information about forest products, and includes a special feature listing the owner, location, species, and board feet of marked timber for sale. By making these reports available, small woodlot owners and sawmill operators for the first time know the going price for forest products, and prices of various species of sawlogs.

Another accomplishment under this program was assisting in organizing the West Virginia Sawmill Operators' Association. The aim of this association is to coordinate efforts of sawmill operators in developing a more efficient and stronger sawmill industry in West Virginia. In addition, progress was made in developing plans for a pilot logging program to provide an efficient and reliable means of harvesting and marketing the woodland crop.

Eggs.--In continuing the egg quality program, assistance was given producers in candling, grading, and sizing eggs through group meetings at markets and individual instructions on the farm.

The department assisted in establishing a new egg marketing program in one area to encourage buying and selling on the basis of quality and to consolidate volume at a central point so as to improve demand. Through this program producers in the area realized 10 to 12 cents more per dozen for their eggs.

There was a steady improvement in the quality of eggs marketed throughout the State, and at one market sales of West Virginia Grade A quality eggs increased more than 70 percent.

Vegetable marketing.--In cooperation with Extension workers, county agents, and vocational agricultural teachers, the department continued to assist farmers on proper harvesting, grading, and packaging methods in an attempt to attract large buyers demanding high quality products in volume. Farmers were assisted in marketing green beans, strawberries, cabbage, sweet corn, and potatoes. As an example of the result of this cooperative effort, farmers received prices from 50 cents to $1 per bushel on green beans above market prices in other areas of the State.

Fruit.--Specialists of the West Virginia Department of Agriculture continued to work with fruit growers in a 4-county area producing 90 percent of the fruit in the State. Information obtained through a survey of apple and peach growers on orchard locations, varieties, volume, grade, and prices was published and distributed to over 800 buyers and truckers.

Livestock.--Major emphasis under this program was placed on continuing and expanding special livestock sales throughout the State. Assistance was given in sorting, classifying, and grading feeder cattle and calves for the 32 special sales held during the year. These sales netted producers an average of from $3 to $4 more per hundredweight than they would have received through other markets.

Working with other State agencies, the department helped organize West Virginia's first feeder pig sale. Producers consigning to this sale received about $4 per hundredweight above prices prevailing through other channels.

Lamb producers following the department's recommendations regarding grading and finishing their lambs increased their returns by about $3 per hundredweight.

Tobacco.--Assistance was again given burley tobacco growers in improving such marketing procedures as stripping, sorting, tying, and grading. Growers were also helped in evaluating tobacco which they offered for sale to improve

their judgment of market values and to thereby increase returns from their crops.

Other products.--The department continued its work in developing outlets for and assisting in the marketing of walnuts, mayapple roots, and other natural crops.

Assistance was also given to several mushroom producers in harvesting, packaging, and establishing market outlets. Indications are that this new crop has considerable potential for bringing new income to the people of West Virginia.

Seal of quality.--The primary objectives of the recently developed Seal of Quality Program are to maintain quality of products from the farm to the consumer and expand market outlets by creating consumer demand for products identified with the West Virginia Seal of Quality label. Egg producers marketing under the quality label are receiving premiums of from 3 to 4 cents per dozen for their eggs.

Collecting and disseminating basic data (WVA-D-1)

County estimates.--The collection of detailed information on crops and livestock by counties was continued and the data published in the county estimate series, along with historical State data on trends in production, yields, acreages, prices, and other agricultural information for the State.

Poultry and dairy news.--The publication of current information on the dairy and poultry industry was continued. These monthly bulletins, providing the latest data on production, prices, costs of feeds, and the general outlook, were mailed to over 1,000 persons, including newspapers, trade publications, and radio stations.

WISCONSIN

Improving quality of dairy products (WIS-A-1)

During the reporting period the State of Wisconsin adopted a regulation under which powder from Grade A raw milk for pasteurization can qualify for the Grade A label provided drying operations comply with certain requirements. The Wisconsin Department of Agriculture furnished considerable assistance to interested operators in making changes and improvements in their plant operations necessary for them to comply with these regulations. Currently, four powder plants have qualified under the Grade A program. These plants, with a daily intake of 2,200,000 pounds of Grade A milk, process approximately 220,000 pounds of powder a day. This powder which was marketed under the Grade A label brought about 1 cent more per pound than powder not qualifying for the label, or an increase in income of about $2,200 per day for these plants.

The survey of nonfat dry milk producing plants was continued with emphasis shifted from raw milk control to the control of plant sanitation. The wide range of difference found in levels of sanitation maintained by several plants pointed out the need for repeat calls and follow-up work.

During the year follow-up visits were made to ice cream manufacturing plants previously found to have high coliform counts in their products. Additional investigations were made of processing and handling methods and equipment, and results of the studies, with recommendations for improvement, were made available to management.

Work was continued during the year on the problem of antibiotic contamination of milk. A study was made to determine the extent of use of antibiotics, together with information on type used, deviation of use, and whether treatment was by producer or veterinarian. Samples of milk were obtained from approximately 1 out of 10 producing dairy farms in the State, representing 9,839 producers from about 103,000 farms. Results of the study indicated that the use of antibiotics on lactating dairy cows was common practice, that penicillin was used intramuscularly to a great extent, terramycin was widely used for udder infusion treatment, and that many producers claimed they did not know treatment with antibiotics would affect the quality of milk.

It was concluded from the study that (1) a regular testing program is needed at all plants receiving milk and cream from producers, (2) an educational program is needed to make all producers aware of the antibiotic problem, (3) the type of drugs used for intramuscular injection of dairy cattle should be limited, and (4) a continued effort maintained to prevent the marketing of adulterated products.

In its program to improve quality of milk for cheese manufacturing, the department continued to assist plant operators in identifying sources of low quality milk. Department personnel cooperated with plant fieldmen in helping the producers involved in locating and correcting the various conditions found to be responsible for poor quality.

The overall quality of butter produced in Wisconsin continued to improve. In 1959, 1.6 percent of producer samples scored undergrade compared to 6.3 percent in 1958.

Providing technical assistance to producers, distributors, and market agencies (WIS-C-1)

Livestock.--Work was continued under this project to assist producers and industry groups in improving the marketing of Wisconsin livestock. An important phase of the project was encouraging the sale of livestock on a graded basis through the use of exhibits, demonstrations, and carcass grading contests. Special attention was given to the training of rural youth in quality identification and grading procedures through Junior Livestock Expositions.

In addition to the livestock shows, department personnel worked toward encouraging better handling practices of animals in various marketing channels. Special emphasis was placed on improving marketing of dairy heifer calves through out-of-State channels under a producer identification program. The Wisconsin Beef Futurity Show and Sale for purebred and commercial beef producers included a quality beef contest based on high proportion of lean to fat, uniform carcasses, and fat covering.

In cooperation with the National Livestock and Meat Board and the Wisconsin Livestock and Meat Council, a series of programs was conducted in three major cities showing cuts and uses of meats. These "Meats for Modern Living Demonstrations" were attended by about 1,300 women and were supplemented by television programs to reach even a greater number of homemakers.

Specialists also assisted producers in organizing and operating special local and area livestock sales. In cooperation with the Wisconsin Swine Breeders' Association, the Weanling Pig Sales provided outlets for purebred breeding stock in two areas.

Fruits and vegetables.--Under the Marketing Order Program for Red Tart Cherries for processing, which was developed with the assistance of the department specialists, the collection of assessments the first year of operation amounted to $21,656, double the amount collected under the voluntary contribution program. The funds collected through this program have enabled the Wisconsin cherry industry to carry on a promotion and advertising program.

In cooperation with the Extension Service, assistance was provided farmers interested in producing and marketing strawberries to diversify their operations. Meetings were held with growers to demonstrate proper grading and packing procedures; also individual assistance was given growers in the application of grading procedures in marketing their berries.

During the apple marketing season growers and marketing agencies were provided information on grade, variety, volume, and selling price for Wisconsin apples.

Work was continued with tobacco growers to improve preparation of tobacco for market. Activities included conducting 9 grading schools for interested growers and dealers; the preparation and distribution of a marketing letter containing suggestions for grading and sorting; special news releases to radio, newspaper, and TV outlets in tobacco areas. In spite of the prevalence of "Wildfire Rust," growers in northern Wisconsin, by following recommendations for tobacco preparation and handling, received an average 1.9 cents per pound over the previous year. Although processing losses of "Wildfire Rust" tobacco were estimated at 25 percent of the original weight, proper handling resulting from following market letter suggestions reduced losses to about 10 to 12 percent.

Dairy products.--Information developed under this phase of the project on operating and transportation costs of 31 cooperative milk handling and processing plants provided the basis of merging 8 of the cooperatives. The reduced operating costs have increased patron returns up to 15 cents per hundredweight of milk. In addition, re-routing or consolidating farm milk truck pick-up routes reduced hauling costs of milk from farm to plant about 3.5 per hundredweight.

Management attention to efficient use of labor, plant layouts, condition of equipment, capacity use of facilities, and volume supply purchases have been additional beneficial results of this project.

Providing new basic data (WIS-D-1)

Livestock.--The Federal-State Crop and Livestock Service continued to provide pertinent information concerning the expanding livestock industry in Wisconsin through the publication of the following reports:

1. Wisconsin Beef Cattle Marketings, Prices, and Supplies
2. Wisconsin Calf Marketings
3. Wisconsin Quarterly Livestock Report
4. Wisconsin Feeder Pig Markets and Prices
5. Wisconsin Livestock Supplies

These reports contain current basic data on production, market supply and areas, marketings, prices, and current marketing situation.

Copies of these publications were distributed to farmers, feeders, processors, marketing agencies, Extension workers, and others interested in the livestock industry.

Dairy.--During the year results of special studies were included in the monthly publication "Wisconsin Dairying," which provides current information on market supplies and price changes throughout the dairy industry. These studies covered the number of plants producing each product by years, changes in dairy herds by size group, and manufactured dairy products by counties.

Work was continued on the preparation of a complete description of the fluid milk market for Wisconsin milk. Efforts in this area were concentrated on special reports furnishing such organizations as the Pure Milk Products Cooperative and government committees with data on special price series and fluid milk supply by areas. In addition, special studies were made for various segments of the milk industry on the economic effects of several proposed new formulas for the pricing of milk under marketing orders.

In response to requests from many marketing agencies, work was started on a study of variation in milk prices by areas within the State, and the variability of such prices with a particular utilization category, such as cheese, butter, and so forth.

Fruits, vegetables, and field crops.--A special survey was undertaken to determine the number of apple trees by varieties, age of trees, or new plantings in the commercial apple producing counties. This study was initiated at the request of the apple industry and will provide needed data on current and potential commercial apple production.

The second report on county crop data was published during the year. The bulletin "Wisconsin Crop Summary - 1959" was used extensively by farmers, processors, manufacturers of farm equipment and supplies, financial agencies, and many related groups. Basic data have been prepared and assembled on feed marketing and utilization in Wisconsin. The relationships of feed prices and livestock prices as they affect Wisconsin agriculture will be included in the published report.

Poultry.--Preliminary analysis of basic data was begun on the location, supply, and distribution of turkeys and broilers in Wisconsin, preparatory to initiating a county estimates series.

Special marketing reports.--The second and third in a proposed series of six publications on farm price data were published. The first part previously completed was a general introduction to the series. The second report covers the field of livestock prices and pricing, with emphasis on (a) general market framework, (b) market timing, and (c) the development of specific economic relationships involved in marketing decisions. The third report deals with seasonality of milk production and prices and relationships between fluid and manufacturing prices.

County and local data on fertilizer use were being prepared for publication. This information will be used by the industry in determining the need for and location of new fertilizer plants and in planning marketing programs.

The study undertaken on wool production and marketing will provide basic market information for the Wisconsin Wool Growers Cooperative to permit better servicing of its membership and will indicate to many potential growers the relative income advantage to sheep and wool production.

The popular release "Wisconsin Farm Facts" was being revised in response to a large demand for copies. The data combined in this publication serve as a ready reference to the scope of agriculture in the State, along with county estimates for a number of important commodities.

SOME RECENT MARKETING PUBLICATIONS BY STATES

GENERAL

CALIFORNIA

Development and Administration of Agricultural Product Promotion Programs, State Department of Agriculture, Sacramento, May 1960.

GEORGIA

Georgia Agricultural Facts 1954-1958, Georgia Crop Reporting Service, Athens, 1960.

Georgia Truck Crop Facts 1954-1958, Georgia Crop Reporting Service, Athens, 1960.

Georgia State Farmers Markets, State Department of Agriculture, Atlanta, 1960.

KENTUCKY

Kentucky Agricultural Statistics--1959, Kentucky Livestock and Crop Reporting Service, Louisville, 1960.

MINNESOTA

Minnesota Agricultural Statistics, 1960, Minnesota Crop and Livestock Reporting Service, St. Paul, June 1960.

NEW JERSEY

New Jersey Nursery Production, New Jersey Crop Reporting Service, Trenton, March 1960.

New Jersey Flower and Plant Production, New Jersey Crop Reporting Service, Trenton, November 1959.

New Jersey Agricultural Statistics, 1958-59, New Jersey Crop Reporting Service, Trenton, May 1960.

PENNSYLVANIA

Wholesale Fishery Products, Marketing Facilities - Pittsburgh, Pennsylvania, State Department of Agriculture, Harrisburg, 1960.

Wholesale Flower Marketing Facilities - Pittsburgh, Pennsylvania, State Department of Agriculture, Harrisburg, 1960.

Customer Satisfaction with Produce Market--Food Distribution Center, Philadelphia, Pennsylvania, State Department of Agriculture, Harrisburg, December 1959.

SOUTH CAROLINA

South Carolina Agricultural Statistics--Trends 1955-59, South Carolina Crop Reporting Service, Clemson, June 1960.

Cash Receipts from Foreign Marketings--Trends 1924-58, South Carolina Crop Reporting Service, Clemson, November 1959.

The Agriculture of Barnwell County, South Carolina, South Carolina Crop Reporting Service, Clemson, December 1959.

The Agriculture of Dillon County, South Carolina, South Carolina Crop Reporting Service, Clemson, December 1959.

SOUTH DAKOTA

County Agricultural Statistics Series (Brown, Corson, Hand, Kingsbury, Hamlin, Lyman, Mellette, Davison, Turner, Lincoln) South Dakota Crop Reporting Service, Pierre, 1960.

WASHINGTON

Series of county data bulletins (Columbia, Garfield, Grays Harbor, Jefferson, Pend Oreille, San Juan, Skamania), State Department of Agriculture, Olympia, 1960.

WISCONSIN

Wisconsin Crop Summary, 1959, Wisconsin Crop Reporting Service, Madison, 1960.

COTTON

LOUISIANA

Louisiana Cotton Gins, Cotton Seed Oil Mills, and Cotton Seed Delinting Plants, Louisiana Department of Agriculture and Immigration, January 1960.

NORTH CAROLINA

North Carolina Agricultural Statistics--Cotton, 1925-1959, North Carolina Crop Reporting Service, Raleigh, July 1960.

DAIRY

GEORGIA

Georgia Dairy Report, Georgia Crop Reporting Service, Athens, April 1960.

LOUISIANA

Louisiana Annual Milk Marketing Report, State Department of Agriculture and Immigration, Baton Rouge, 1960.

MINNESOTA

Minnesota's Dairy Industry, Minnesota Crop and Livestock Reporting Service, St. Paul, June 1960.

NEW YORK

Statistics Relative to the Dairy Industry in New York State--1958, New York Crop Reporting Service, Albany, November 1959.

VIRGINIA

Looking Into the Fluid Milk and Ice Cream Industry in Virginia, Department of Agriculture and Immigration, Richmond, June 1960.

WISCONSIN

Wisconsin Agricultural Prices--Milk, Wisconsin Crop Reporting Service, Madison, 1960.

FRUIT

ALABAMA

Peach Graders' Guide, State Department of Agriculture and Industries in cooperation with the Extension Service, Montgomery, 1960.

CALIFORNIA

California Fruit and Nut Acreage, California Crop and Livestock Reporting Service, Sacramento, June 1960.

ILLINOIS

Agricultural Marketing Statistics--Fruits, Vegetables, and Horticultural Specialties, Illinois Cooperative Crop Reporting Service, Springfield, April 1960.

NEW YORK

Fruit Tree Survey, Selected Counties, New York, New York Crop Reporting Service, Albany, February 1960.

OHIO

Fruit Growers Directory, State Department of Agriculture, Columbus, 1960.

SOUTH CAROLINA

South Carolina Grape Statistics--Trends 1909-1959, South Carolina Crop Reporting Service, Clemson, August 1960.

GRAIN AND FORAGE

NORTH CAROLINA

Marketing Grain on Grade and Quality, State Department of Agriculture, Raleigh, 1960.

TEXAS

1959 Seed Directory, Texas Department of Agriculture, Austin.

WASHINGTON

Washington Alfalfa Hay Production and Sales, State Department of Agriculture, Olympia, 1960.

LIVESTOCK

IOWA

Pig Crops--Geographic Patterns in Iowa, Iowa Crop and Livestock Reporting Service, Des Moines, June 1960.

KENTUCKY

Market Outlets for Sheep and Lambs in Kentucky, Kentucky Crop Reporting Service, Louisville, June 1960.

WASHINGTON

Washington Beef Cattle (Competitive Factors of Canadian, Australian, and New Zealand Imports), State Department of Agriculture, Olympia, 1960.

WISCONSIN

Wisconsin Agricultural Prices--Livestock, Wisconsin Crop Reporting Service, Madison, 1960.

POULTRY AND EGGS

ALABAMA

Grading and Marketing Shell Eggs, State Department of Agriculture and Industries, Montgomery, 1960.

MARYLAND

Evaluation of Broiler Grade Defects by Quality Control Methods, State Board of Agriculture in cooperation with Extension Service, College Park, 1960.

TOBACCO

NORTH CAROLINA

North Carolina Tobacco Report, 1959-1960, State Department of Agriculture, Raleigh, March 1960.

North Carolina Agricultural Statistics--Tobacco, 1955-1958, North Carolina Crop Reporting Service, Raleigh, January 1960.

VEGETABLES

ALABAMA

Tomato Graders' Guide, State Department of Agriculture and Industries in cooperation with Extension Service, Montgomery, 1960.

WASHINGTON

Washington Winter Squash Production and Marketing, State Department of Agriculture, Olympia, 1960.

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